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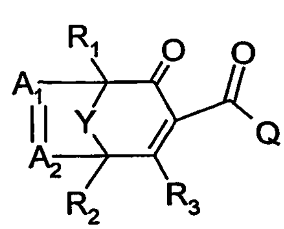
(54) Title: NOVEL HERBICIDES



(I)

(57) Abstract: Compounds of formula (I), wherein the substituents are as defined in claim 1, and the agrochemically acceptable salts and all stereoisomers and tautomeric forms of the compounds of formula I are suitable for use as herbicides.

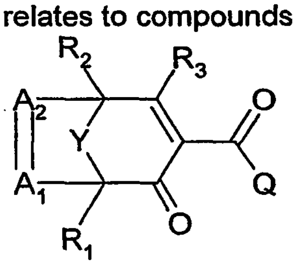
Novel herbicides

The present invention relates to novel, herbicidally active nicotinoyl derivatives, to processes for their preparation, to compositions comprising those compounds, and to their use in controlling weeds, especially in crops of useful plants, or in inhibiting plant growth.

Nicotinoyl derivatives having herbicidal action are described, for example, in WO 00/15615 and WO 01/94339 .

There have now been found novel nicotinoyl derivatives having herbicidal and growth-inhibiting properties, the structures of which are distinguished by a double bond in the 6,7-position of the bicyclo[3.2.1]oct-3-en-2-one, bicyclo[3.2.1]nona-3-en-2-one, 8-oxa-bicyclo-[3.2.1]octa-3-en-2-one, 8-aza-bicyclo[3.2.1]octa-3-en-2-one, 8-thia-bicyclo[3.2.1]octa-3-en-2-one and bicyclo[3.2.1]octa-3-ene-2,8-dione group. Some of the compounds of that kind are covered by WO 00/15615 but none of those compounds is specifically disclosed.
WO 01/66522 includes pyridine ketones having bicyclo[3.2.1]oct-3-en-2-one groups as intermediates in the preparation of aroyl ketones. There is no mention therein of those compounds having a herbicidal action.

The present invention accordingly relates to compounds of formula I



(I)

wherein
Y is oxygen, NR_{4a}, sulfur, sulfonyl, sulfinyl, C(O), C(=NR_{4b}), C(=$CR_{6a}R_{6b}$) or a C_1-C_4alkylene or C_2-C_4alkenylene chain, which may be interrupted by oxygen, NR_{5a}, sulfur, sulfonyl, sulfinyl, C(O) or C(=NR_{5b}) and/or mono- or poly-substituted by R_6;
A_1 is nitrogen or CR_7;
A_2 is nitrogen or CR_8;
R_1, R_2, R_6, R_7 and R_8 are each independently of the others hydrogen, hydroxy, mercapto, NO_2, cyano, halogen, formyl, oxyiminomethylene, C_1-C_6alkoxyiminomethylene, C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy,

C_1-C_6haloalkoxy, C_3-C_6alkenyloxy, C_3-C_6alkynyloxy, C_3-C_6oxacycloalkyl, C_3-C_6thiacycloalkyl, C_3-C_6dioxacycloalkyl, C_3-C_6dithiacycloalkyl, C_3-C_6oxathiacycloalkyl, C_1-C_6alkoxycarbonyl, C_1-C_6alkylcarbonyl, C_1-C_6alkoxycarbonyloxy, C_1-C_6alkylcarbonyloxy, C_1-C_6alkylthio, C_1-C_6alkylsulfonyl, C_1-C_6alkylsulfinyl, NR_9R_{10}, C_3-C_6cycloalkyl, tri(C_1-C_6alkyl)silyl, di(C_1-C_6alkyl)phenylsilyl, tri(C_1-C_6alkyl)silyloxy, di(C_1-C_6alkyl)phenylsilyloxy or Ar_1;

or R_1, R_2, R_6, R_7, R_8 are each independently of the others a C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl or C_3-C_6cycloalkyl group, which may be interrupted by oxygen, sulfur, sulfonyl, sulfinyl, -NR_{11}- or –C(O)- and/or mono-, di- or tri-substituted by hydroxy, mercapto, NO_2, cyano, halogen, formyl, C_1-C_6alkoxy, C_3-C_6alkenyloxy, C_3-C_6alkynyloxy, C_1-C_6haloalkoxy, C_1-C_2alkoxy-C_1-C_2alkoxy, C_1-C_4alkoxycarbonyloxy, C_1-C_4alkylcarbonyloxy, C_1-C_4alkoxy-carbonyl, C_1-C_4alkylcarbonyl, C_1-C_6alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6alkylsulfonyl, $NR_{12}R_{13}$, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_6cycloalkyl, tri(C_1-C_6alkyl)silyl, tri(C_1-C_6alkyl)-silyloxy or Ar_2;

or two substituents R_6 at the same carbon atom together form a –CH_2O- or a C_2-C_5alkylene chain, which may be interrupted once or twice by oxygen, sulfur, sulfinyl or sulfonyl and/or mono- or poly-substituted by R_{6c}, with the proviso that two hetero atoms may not be located next to one another;

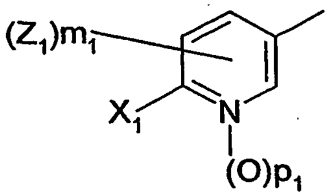
or two substituents R_6 at different carbon atoms together form an oxygen bridge or a C_1-C_4alkylene chain, which may in turn be substituted by R_{6c};

or R_7 and R_8 together form a -CH_2CH=CH-, -OCH=CH- or –CH=CH-CH=CH- bridge or a C_3-C_4alkylene chain, which may be interrupted by oxygen or –$S(O)_{n1}$- and/or mono- or poly-substituted by R_{6d};

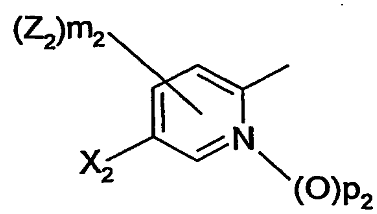
R_3 is hydroxy, halogen, mercapto, C_1-C_8alkylthio, C_1-C_8alkylsulfinyl, C_1-C_8alkylsulfonyl, C_1-C_8haloalkylthio, C_1-C_8haloalkylsulfinyl, C_1-C_8haloalkylsulfonyl, C_1-C_4alkoxy-C_1-C_4alkylthio, C_1-C_4alkoxy-C_1-C_4alkylsulfinyl, C_1-C_4alkoxy-C_1-C_4alkylsulfonyl, C_3-C_8alkenylthio, C_3-C_8-alkynylthio, C_1-C_4alkylthio-C_1-C_4alkylthio, C_3-C_4alkenylthio-C_1-C_4alkylthio, C_1-C_4alkoxy-carbonyl-C_1-C_4alkylthio, C_1-C_4alkoxycarbonyl-C_1-C_4alkylsulfinyl, C_1-C_4alkoxycarbonyl-C_1-C_4alkylsulfonyl, C_3-C_8cycloalkylthio, C_3-C_8cycloalkylsulfinyl, C_3-C_8cycloalkylsulfonyl, phenyl-C_1-C_4alkylthio, phenyl-C_1-C_4alkylsulfinyl, phenyl-C_1-C_4alkylsulfonyl, $S(O)n_1$-Ar_3, phenylthio, phenylsulfinyl, phenylsulfonyl, it being possible for the phenyl-containing groups to be substituted by one or more C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3alkoxy, C_1-C_3haloalkoxy, C_1-C_4alkoxycarbonyl, halogen, cyano, hydroxy or nitro groups;

or R_3 is O^-M^+, wherein M^+ is an alkali metal cation or an ammonium cation;

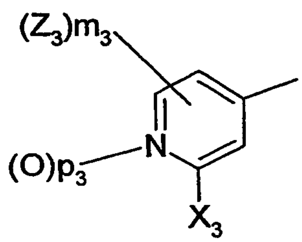
Q is a radical



(Q_1),



(Q_2) or



(Q_3), wherein

p_1, p_2 and p_3 are 0 or 1;

m_1, m_2 and m_3 are 1, 2 or 3;

X_1, X_2 and X_3 are hydroxy, halogen, C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6halo-alkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_1-C_6alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylthio, C_1-C_6haloalkylsulfinyl or C_1-C_6halo-alkylsulfonyl;

Z_1, Z_2 and Z_3 are C_1-C_6alkyl which is substituted by the following substituents: C_3-C_4cyclo-alkyl or C_3-C_4cycloalkyl substituted by halogen, C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl; oxiranyl or oxiranyl substituted by C_1-C_6alkyl or C_1-C_3alkoxy-C_1-C_3alkyl; 3-oxet-anyl or 3-oxetanyl substituted by C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl; 3-oxet-anyloxy or 3-oxetanyloxy substituted by C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl; C_3-C_6cycloalkyloxy or C_3-C_4cycloalkyloxy substituted by halogen, C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl; C_1-C_6haloalkoxy; C_1-C_6alkylsulfonyloxy; C_1-C_6haloalkylsulfonyloxy; phenylsulfonyloxy; benzylsulfonyloxy; benzoyloxy; phenoxy; phenylthio; phenylsulfinyl; phenylsulfonyl; Ar_{10}; OAr_{12}; tri(C_1-C_6alkyl)silyl or tri(C_1-C_6alkyl)silyloxy, it being possible for the phenyl-containing groups to be mono- or poly-substituted by C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3alkoxy, C_1-C_3haloalkoxy, halogen, cyano, hydroxy or nitro;

or Z_1, Z_2 and Z_3 are 3-oxetanyl; 3-oxetanyl substituted by C_1-C_3alkoxy, C_1-C_3alkoxy-C_1-C_3-alkyl or C_1-C_6alkyl; C_3-C_6cycloalkyl substituted by halogen, C_1-C_3alkyl or C_1-C_3alkoxy-C_1-C_3-alkyl; tri(C_1-C_6alkyl)silyl; tri(C_1-C_6alkyl)silyloxy or CH=P(phenyl)$_3$;

or Z_1, Z_2 and Z_3 are a C_1-C_6alkyl, C_2-C_6alkenyl or C_2-C_6alkynyl group, which is interrupted by oxygen, -O(CO)-, -(CO)O-, -O(CO)O-, -N(R_{14})O-, -ONR$_{15}$-, sulfur, sulfinyl, sulfonyl, -SO$_2$NR$_{16}$-, -NR$_{17}$SO$_2$- or –NR$_{18}$- and is mono- or poly-substituted by L_1; it also being

possible for L_1 to be bonded at the terminal carbon atom of the C_1-C_6alkyl, C_2-C_6alkenyl or C_2-C_6alkynyl group;

or Z_1, Z_2 and Z_3 are hydrogen, hydroxy, mercapto, NO_2, cyano, halogen, formyl, C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_1-C_6alkoxycarbonyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylthio, C_1-C_6alkylsulfonyl, C_1-C_6alkylsulfinyl, $NR_{22}R_{23}$, phenyl which may be mono- or poly-substituted by C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3alkoxy, C_1-C_3haloalkoxy, halogen, cyano, hydroxy or nitro, C_3-C_6cycloalkyl, C_5-C_6cycloalkyl substituted by C_1-C_3alkoxy, C_1-C_3alkoxy-C_1-C_3alkyl or C_1-C_6alkyl, or Ar_5, O-Ar_6, $N(R_{24})Ar_7$ or $S(O)n_6Ar_8$;

L_1 is hydrogen, halogen, hydroxy, amino, formyl, nitro, cyano, mercapto, carbamoyl, $P(O)(OC_1$-$C_6alkyl)_2$, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_1-C_6alkoxycarbonyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_3-C_6cycloalkyl, halo-substituted C_3-C_6cycloalkyl, C_3-C_6alkenyloxy, C_3-C_6alkynyloxy, C_3-C_6haloalkenyloxy, cyano-C_1-C_6alkoxy, C_1-C_6alkoxy-C_1-C_6alkoxy, C_1-C_6alkylthio-C_1-C_6alkoxy, C_1-C_6alkylsulfinyl-C_1-C_6alkoxy, C_1-C_6alkylsulfonyl-C_1-C_6alkoxy, C_1-C_6alkoxycarbonyl-C_1-C_6alkoxy, C_1-C_6alkylcarbonyloxy-C_1-C_6alkylcarbonyl, C_1-C_6alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylthio, C_1-C_6haloalkylsulfinyl, C_1-C_6haloalkylsulfonyl or oxiranyl, which may in turn be substituted by C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl, or (3-oxetanyl)-oxy, which may in turn be substituted by C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl, or benzoyloxy, benzyloxy, benzylthio, benzylsulfinyl, benzylsulfonyl, C_1-C_6alkylamino, di(C_1-C_6alkyl)amino, $R_{19}S(O)_2O$-, $R_{20}N(R_{21})SO_2$-, rhodano, phenyl, phenoxy, phenylthio, phenylsulfinyl, phenylsulfonyl, Ar_4 or OAr_{11}, it being possible for the phenyl-containing groups in turn to be substituted by one or more C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3alkoxy, C_1-C_3haloalkoxy, halogen, cyano, hydroxy or nitro groups;

R_{4a} and R_{5a} are each independently of the other hydrogen, C_1-C_6alkyl, C_1-C_6haloalkyl, cyano, formyl, C_1-C_6alkylcarbonyl, C_1-C_6alkoxycarbonyl, carbamoyl, C_1-C_6alkylaminocarbonyl, di(C_1-C_6alkylamino)carbonyl, di(C_1-C_6alkylamino)sulfonyl, C_3-C_6cycloalkylcarbonyl, C_1-C_6-alkylsulfonyl, phenylcarbonyl, phenylaminocarbonyl or phenylsulfonyl, it being possible for the phenyl groups to be mono- or poly-substituted by C_1-C_6alkyl, C_1-C_6haloalkyl, C_1-C_6-alkoxy, C_1-C_6haloalkoxy, halogen, cyano, hydroxy or nitro;

R_{4b} and R_{5b} are each independently of the other hydroxy, C_1-C_6alkoxy, C_3-C_6alkenyloxy, C_3-C_6alkynyloxy or benzyloxy, it being possible for the benzyl group to be mono- or poly-substituted by C_1-C_6alkyl, C_1-C_6haloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, halogen, cyano, hydroxy or nitro;

R_9, R_{11}, R_{13}, R_{16}, R_{17}, R_{18}, R_{20}, R_{23} and R_{24} are each independently of the others hydrogen, C_1-C_6alkyl, Ar_9, C_1-C_6haloalkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkoxycarbonyl, C_1-C_6alkylsulfonyl,

phenyl, it being possible for the phenyl group in turn to be mono- or poly-substituted by C_1-C_6alkyl, C_1-C_6haloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, halogen, cyano, hydroxy or nitro;
R_{6a} is hydrogen, C_1-C_6alkyl or C_1-C_6alkylcarbonyl; or together with R_{6b} is a C_2-C_5alkylene chain;
R_{6b}, R_{6d}, R_{10}, R_{12} and R_{22} are each independently of the others hydrogen or C_1-C_6alkyl;
R_{6c}, R_{14}, R_{15}, R_{19} and R_{21} are each independently of the others C_1-C_6alkyl or C_1-C_6haloalkyl;
Ar_1, Ar_2, Ar_3, Ar_4, Ar_5, Ar_6, Ar_7, Ar_8, Ar_9, Ar_{10}, Ar_{11} and Ar_{12} are each independently of the others a five- to ten-membered, monocyclic or fused bicyclic ring system, which may be aromatic, partially saturated or fully saturated and may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen, sulfur, C(O) and C(=NR_{25}), and each ring system may contain not more than two oxygen atoms, not more than two sulfur atoms, not more than two C(O) groups and not more than one C(=NR_{25}) group, and each ring system may itself be mono- or poly-substituted by C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_3-C_6alkenyloxy, C_3-C_6alkynyl-oxy, mercapto, amino, hydroxy, C_1-C_6alkylthio, C_1-C_6haloalkylthio, C_3-C_6alkenylthio, C_3-C_6-haloalkenylthio, C_3-C_6alkynylthio, C_1-C_3alkoxy-C_1-C_3alkylthio, C_1-C_4alkylcarbonyl-C_1-C_3alkyl-thio, C_1-C_4alkoxycarbonyl-C_1-C_3alkylthio, cyano-C_1-C_3alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6halo-alkylsulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylsulfonyl, aminosulfonyl, C_1-C_2alkylamino-sulfonyl, N,N-di(C_1-C_2alkyl)aminosulfonyl, di(C_1-C_4alkyl)amino, halogen, cyano, nitro or phenyl, it being possible for the phenyl group in turn to be substituted by hydroxy, C_1-C_6-alkylthio, C_1-C_6haloalkylthio, C_3-C_6alkenylthio, C_3-C_6haloalkenylthio, C_3-C_6alkynylthio, C_1-C_3alkoxy-C_1-C_3alkylthio, C_1-C_4alkylcarbonyl-C_1-C_3alkylthio, C_1-C_4alkoxycarbonyl-C_1-C_3-alkylthio, cyano-C_1-C_3alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6haloalkylsulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylsulfonyl, aminosulfonyl, C_1-C_2alkylaminosulfonyl, N,N-di(C_1-C_2alkyl)amino-sulfonyl, di(C_1-C_4alkyl)amino, halogen, cyano or nitro, and the substituents at the nitrogen atom in the heterocyclic ring being other than halogen, and two oxygen atoms not being located next to one another;
R_{25} is hydrogen, hydroxy, C_1-C_6alkyl, C_1-C_6haloalkyl, C_1-C_6alkoxy, C_1-C_6alkylcarbonyl, C_1-C_6alkoxycarbonyl or C_1-C_6alkylsulfonyl; and
n_1 is 0, 1 or 2; and n_6 is 0, 1 or 2;
and agronomically acceptable salts/isomers/enantiomers/tautomers of those compounds.

The alkyl groups appearing in the substituent definitions may be straight-chain or branched and are, for example, methyl, ethyl, n-propyl, isopropyl, n-butyl, sec-butyl, isobutyl, tert-butyl, pentyl, hexyl, heptyl and octyl and the branched isomers thereof. Alkoxy, alkenyl and alkynyl radicals are derived from the mentioned alkyl radicals. The alkenyl and alkynyl groups may

be mono- or poly-unsaturated. C_1-C_4alkylene and C_2-C_4alkenylene chains may likewise be straight-chain or branched.

Halogen is generally fluorine, chlorine, bromine or iodine, preferably fluorine or chlorine. The same is true of halogen in conjunction with other meanings, such as haloalkyl or halophenyl.

Haloalkyl groups preferably have a chain length of from 1 to 6 carbon atoms. Haloalkyl is, for example, fluoromethyl, difluoromethyl, trifluoromethyl, chloromethyl, dichloromethyl, trichloromethyl, 2,2,2-trifluoroethyl, 2-fluoroethyl, 2-chloroethyl, pentafluoroethyl, 1,1-difluoro-2,2,2-trichloroethyl, 2,2,3,3-tetrafluoroethyl or 2,2,2-trichloroethyl; preferably trichloromethyl, difluorochloromethyl, difluoromethyl, trifluoromethyl or dichlorofluoromethyl.

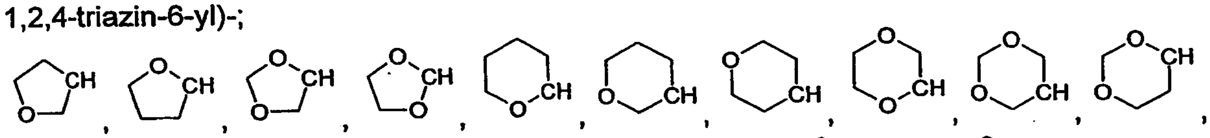
In the context of the present invention, the term "mono- or poly-substituted" is generally to be understood as meaning mono- to penta-substituted, especially mono- to tri-substituted.

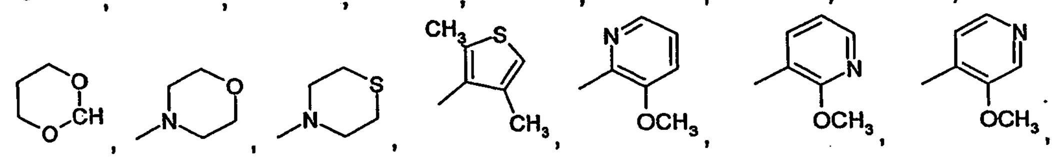
As haloalkenyl there come into consideration alkenyl groups mono- or poly-substituted by halogen, halogen being fluorine, chlorine, bromine or iodine, and especially fluorine or chlorine, for example 2,2-difluoro-1-methylvinyl, 3-fluoropropenyl, 3-chloropropenyl, 3-bromopropenyl, 2,3,3-trifluoropropenyl, 2,3,3-trichloropropenyl and 4,4,4-trifluoro-but-2-en-1-yl. Of the C_3-C_8alkenyl groups mono-, di- or tri-substituted by halogen preference is given to those having a chain length of from 3 to 5 carbon atoms.

As haloalkynyl there come into consideration, for example, alkynyl groups mono- or poly-substituted by halogen, halogen being bromine, iodine and especially fluorine or chlorine, for example 3-fluoropropynyl, 3-chloropropynyl, 3-bromopropynyl, 3,3,3-trifluoropropynyl and 4,4,4-trifluoro-but-2-yn-1-yl. Of the alkynyl groups mono- or poly-substituted by halogen preference is given to those having a chain length of from 3 to 5 carbon atoms.

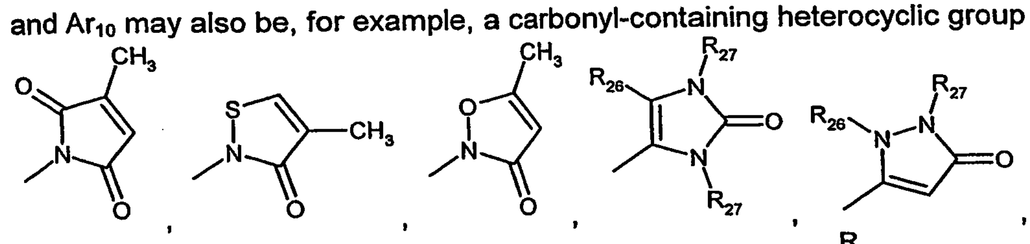
Ar_1, Ar_2, Ar_3, Ar_4, Ar_5, Ar_6, Ar_7, Ar_8, Ar_9, Ar_{10}, Ar_{11} and Ar_{12} are, for example, phenyl, naphthyl or the following heterocyclic groups: (1-methyl-1H-pyrazol-3-yl)-; (1-ethyl-1H-pyrazol-3-yl)-; (1-propyl-1H-pyrazol-3-yl)-; (1H-pyrazol-3-yl)-; (1,5-dimethyl-1H-pyrazol-3-yl)-; (4-chloro-1-methyl-1H-pyrazol-3-yl)-; (1H-pyrazol-1-yl)-; (3-methyl-1H-pyrazol-1-yl)-; (3,5-dimethyl-1H-pyrazol-1-yl)-; (3-isoxazolyl)-; (5-methyl-3-isoxazolyl)-; (3-methyl-5-isoxazolyl)-; (5-isoxazolyl)-; (1H-pyrrol-2-yl)-; (1-methyl-1H-pyrrol-2-yl)-; (1H-pyrrol-1-yl)-; (1-methyl-1H-pyrrol-3-yl)-; (2-furanyl)-; (5-methyl-2-furanyl)-; (3-furanyl)-; (5-methyl-2-thienyl)-; (2-thienyl)-; (3-thienyl)-; (1-methyl-1H-imidazol-2-yl)-; (1H-imidazol-2-yl)-; (1-methyl-1H-imidazol-4-yl)-; (1-

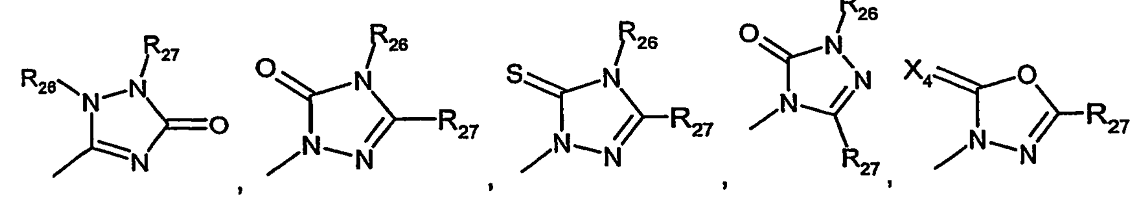
methyl-1H-imidazol-5-yl)-; (4-methyl-2-oxazolyl)-; (5-methyl-2-oxazolyl)-; (2-oxazolyl)-; (2-methyl-5-oxazolyl)-; (2-methyl-4-oxazolyl)-; (4-methyl-2-thiazolyl)-; (5-methyl-2-thiazolyl)-; (2-thiazolyl)-; (2-methyl-5-thiazolyl)-; (2-methyl-4-thiazolyl)-; (3-methyl-4-isothiazolyl)-; (3-methyl-5-isothiazolyl)-; (5-methyl-3-isothiazolyl)-; (1-methyl-1H-1,2,3-triazol-4-yl)-; (2-methyl-2H-1,2,3-triazol-4-yl)-; (4-methyl-2H-1,2,3-triazol-2-yl)-; (1-methyl-1H-1,2,4-triazol-3-yl)-; (1,5-dimethyl-1H-1,2,4-triazol-3-yl)-; (3-methyl-1H-1,2,4-triazol-1-yl)-; (5-methyl-1H-1,2,4-triazol-1-yl)-; (4,5-dimethyl-4H-1,2,4-triazol-3-yl)-; (4-methyl-4H-1,2,4-triazol-3-yl)-; (4H-1,2,4-triazol-4-yl)-; (5-methyl-1,2,3-oxadiazol-4-yl)-; (1,2,3-oxadiazol-4-yl)-; (3-methyl-1,2,4-oxadiazol-5-yl)-; (5-methyl-1,2,4-oxadiazol-3-yl)-; (4-methyl-3-furazanyl)-; (3-furazanyl)-; (5-methyl-1,2,4-oxadiazol-2-yl)-; (5-methyl-1,2,3-thiadiazol-4-yl)-; (1,2,3-thiadiazol-4-yl)-; (3-methyl-1,2,4-thiadiazol-5-yl)-; (5-methyl-1,2,4-thiadiazol-3-yl)-; (4-methyl-1,2,5-thiadiazol-3-yl)-; (5-methyl-1,3,4-thiadiazol-2-yl)-; (1-methyl-1H-tetrazol-5-yl)-; (1H-tetrazol-5-yl)-; (5-methyl-1H-tetrazol-1-yl)-; (2-methyl-2H-tetrazol-5-yl)-; (2-ethyl-2H-tetrazol-5-yl)-; (5-methyl-2H-tetrazol-2-yl)-; (2H-tetrazol-2-yl)-; (2-pyridyl)-; (6-methyl-2-pyridyl)-; (4-pyridyl)-; (3-pyridyl)-; (6-methyl-3-pyridazinyl)-; (5-methyl-3-pyridazinyl)-; (3-pyridazinyl)-; (4,6-dimethyl-2-pyrimidinyl)-; (4-methyl-2-pyrimidinyl)-; (2-pyrimidinyl)-; (2-methyl-4-pyrimidinyl)-; (2-chloro-4-pyrimidinyl)-; (2,6-dimethyl-4-pyrimidinyl)-; (4-pyrimidinyl)-; (2-methyl-5-pyrimidinyl)-; (6-methyl-2-pyrazinyl)-; (2-pyrazinyl)-; (4,6-dimethyl-1,3,5-triazin-2-yl)-; (4,6-dichloro-1,3,5-triazin-2-yl)-; (1,3,5-triazin-2-yl)-; (4-methyl-1,3,5-triazin-2-yl)-; (3-methyl-1,2,4-triazin-5-yl)-; (3-methyl-1,2,4-triazin-6-yl)-;

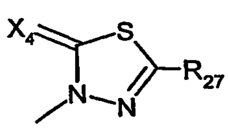
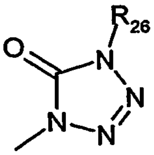
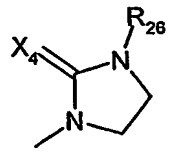
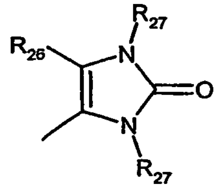
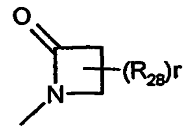


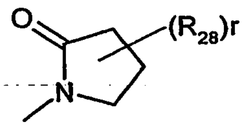
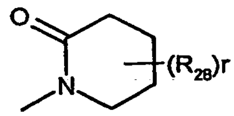


and Ar_{10} may also be, for example, a carbonyl-containing heterocyclic group

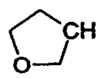
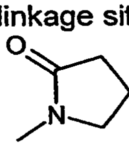




 ,  ,  ,  ,  ,

 or  ,

wherein each R_{26} is methyl, each R_{27} and each R_{28} are independently hydrogen, C_1-C_3alkyl, C_1-C_3alkoxy, C_1-C_3alkylthio or trifluoromethyl, X_4 is oxygen or sulfur and r = 1, 2, 3 or 4.

Where no free valency is indicated in those definitions of Ar_1, Ar_2, Ar_3, Ar_4, Ar_5, Ar_6, Ar_7, Ar_8, Ar_9, Ar_{10}, Ar_{11} and Ar_{12}, for example as in  , the linkage site is located at the carbon atom labelled "CH" or in a case such as, for example,  at the bonding site indicated at the bottom left.

The alkali metal cation M^+ (for example in the meaning of O^-M^+ in R_3) denotes in the context of the present invention preferably the sodium cation or the potassium cation.

Alkoxy groups preferably have a chain length of from 1 to 6 carbon atoms. Alkoxy is, for example, methoxy, ethoxy, propoxy, isopropoxy, n-butoxy, isobutoxy, sec-butoxy and tert-butoxy and the isomers of pentyloxy and hexyloxy; preferably methoxy and ethoxy. Alkyl-carbonyl is preferably acetyl, propionyl or pivaloyl. Alkoxycarbonyl is, for example, methoxy-carbonyl, ethoxycarbonyl, propoxycarbonyl, isopropoxycarbonyl, n-butoxycarbonyl, isobutoxycarbonyl, sec-butoxycarbonyl or tert-butoxycarbonyl; preferably methoxycarbonyl or ethoxycarbonyl. Haloalkoxy groups preferably have a chain length of from 1 to 6 carbon atoms. Haloalkoxy is e.g. fluoromethoxy, difluoromethoxy, trifluoromethoxy, 2,2,2-trifluoro-ethoxy, 1,1,2,2-tetrafluoroethoxy, 2-fluoroethoxy, 2-chloroethoxy, 2,2-difluoroethoxy and 2,2,2-trichloroethoxy; preferably difluoromethoxy, 2-chloroethoxy and trifluoromethoxy.

Alkylthio groups preferably have a chain length of from 1 to 8 carbon atoms. Alkylthio is, for example, methylthio, ethylthio, propylthio, isopropylthio, n-butylthio, isobutylthio, sec-butylthio or tert-butylthio, preferably methylthio and ethylthio. Alkylsulfinyl is, for example, methyl-sulfinyl, ethylsulfinyl, propylsulfinyl, isopropylsulfinyl, n-butylsulfinyl, isobutylsulfinyl, sec-

butylsulfinyl, tert-butylsulfinyl; preferably methylsulfinyl and ethylsulfinyl. Alkylsulfonyl is, for example, methylsulfonyl, ethylsulfonyl, propylsulfonyl, isopropylsulfonyl, n-butylsulfonyl, isobutylsulfonyl, sec-butylsulfonyl or tert-butylsulfonyl; preferably methylsulfonyl or ethylsulfonyl.

Alkylamino is, for example, methylamino, ethylamino, n-propylamino, isopropylamino or the isomers of butylamine. Dialkylamino is, for example, dimethylamino, methylethylamino, diethylamino, n-propylmethylamino, di-butylamino and di-isopropylamino. Preference is given to alkylamino and dialkylamino groups – including as a component of (N-alkyl)sulfonylamino and N-(alkylamino)sulfonyl groups, such as (N,N-dimethyl)sulfonylamino and N,N-(dimethylamino)sulfonyl – each having a chain length of from 1 to 4 carbon atoms.

Alkoxyalkoxy groups preferably have a chain length of from 1 to 8 carbon atoms. Examples of alkoxyalkoxy are: methoxymethoxy, methoxyethoxy, methoxypropoxy, ethoxymethoxy, ethoxyethoxy, propoxymethoxy and butoxybutoxy. Alkoxyalkyl groups have a chain length of preferably from 1 to 6 carbon atoms. Alkoxyalkyl is, for example, methoxymethyl, methoxyethyl, ethoxymethyl, ethoxyethyl, n-propoxymethyl, n-propoxyethyl, isopropoxymethyl or isopropoxyethyl.

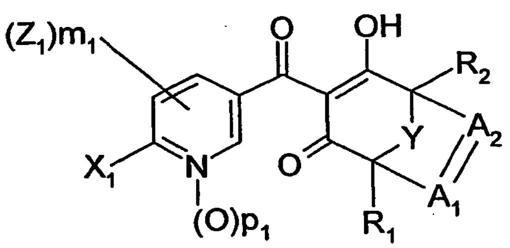
Alkylthioalkyl groups preferably have from 1 to 8 carbon atoms. Alkylthioalkyl is, for example, methylthiomethyl, methylthioethyl, ethylthiomethyl, ethylthioethyl, n-propylthiomethyl, n-propylthioethyl, isopropylthiomethyl, isopropylthioethyl, butylthiomethyl, butylthioethyl or butylthiobutyl.

The cycloalkyl groups having up to 8 carbon atoms preferably have from 3 to 6 ring carbon atoms, for example cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl. A cycloalkyl group having up to 8 carbon atoms also includes a C_3-C_6alkyl group bonded by way of a methylene or ethylene bridge, for example cyclopropylmethyl, cyclobutylmethyl and cyclopentylmethyl. Cycloalkyl groups, as well as, for example, the oxygen-containing oxiranyl, oxiranylmethyl, 3-oxetanyl, 2- and 3-tetrahydrofuranyl, 2-(2- and 3-tetrahydrofuranyl)methyl, 2-, 3- and 4-tetrahydropyranyl, 2-(2-tetrahydropyranyl)methyl, 1,3-dioxolanyl, 2-(1,3-dioxolanyl)methyl, 4-(1,3-dioxolanyl)methyl, 1,3-dioxanyl, 1,4-dioxanyl and similar saturated groups – especially as a component of Ar_5 in L_1 – can also be mono- or poly-substituted by C_1-C_3alkyl, preferably mono- to tetra-substituted by methyl.

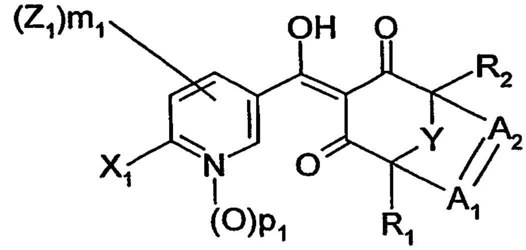
Phenyl, including as a component of a substituent such as phenoxy, benzyl, benzyloxy, benzoyl, phenylthio, phenylalkyl, phenoxyalkyl, may be in substituted form. The substituents may in that case be in the ortho-, meta- and/or para-position(s). Preferred substituent positions are the ortho- and para-positions relative to the ring linkage site. The phenyl groups are preferably unsubstituted or mono- or di-substituted, especially unsubstituted or mono-substituted.

Z_1, Z_2 and Z_3 as a C_1-C_6alkyl group which is interrupted by oxygen, -O(CO)-, -(CO)O-, -O(CO)O-, -N(R_{14})O-, -ONR$_{15}$-, sulfur, sulfinyl, sulfonyl, -SO_2NR_{16}-, -$NR_{17}SO_2$- or –NR_{18}- and may be mono- or poly-substituted by a group L_1 when that C_1-C_6alkyl group is interrupted by oxygen, -O(CO)O-, sulfur, sulfinyl or sulfonyl, is to be understood as meaning, for example, a bidentate bridging member –CH_2OCH_2-, -$CH_2CH_2OCH_2$-, -$CH_2OCH_2CH_2$-, -$CH_2OCH_2CH_2CH_2$-, -$CH_2OC(O)CH_2$-, -$CH_2(CO)OCH_2$-, -$CH_2O(CO)OCH_2$-, –CH_2SCH_2-, -$CH_2S(O)CH_2$-, –$CH_2SO_2CH_2$-, –$CH_2SCH_2CH_2$-, -$CH_2S(O)CH_2CH_2$-, –$CH_2SO_2CH_2CH_2$-, -$CH_2N(CH_3)SO_2CH_2$-, -$CH_2N(SO_2CH_3)CH_2$-, -$CH_2N(C(O)CH_3)CH_2$-, -$CH_2N(COOCH_2CH_3)CH_2$- or -$CH_2N(COOCH_3)CH_2$-, the left-hand bonding site being bonded to the pyridine moiety and the right-hand side to the substituent L_1. And Z_1, Z_2 and Z_3 as a C_2-C_6alkenyl or C_2-C_6alkynyl group which is interrupted by oxygen, -O(CO)-, -(CO)O-, -O(CO)O-, -N(R_{14})O-, -ONR$_{15}$-, sulfur, sulfinyl, sulfonyl, -SO_2NR_{16}-, -$NR_{17}SO_2$- or –NR_{18}- and may be mono- or poly-substituted by a group L_1 is to be understood as meaning, for example, a bidentate bridging member -CH=$CHCH_2OCH_2$- or -C≡CCH_2OCH_2-. Such an unsubstituted or L_1-substituted C_1-C_6alkyl, C_2-C_6alkenyl or C_2-C_6alkynyl group Z_1, Z_2 or Z_3 which is interrupted by oxygen, -O(CO)-, -(CO)O-, -O(CO)O-, -N(R_{14})O-, -ONR$_{15}$-, sulfur, sulfinyl, sulfonyl, -SO_2NR_{16}-, -$NR_{17}SO_2$- or –NR_{18}- can be either straight-chain or branched, for example as in the case of the bidentate bridging members –$CH(CH_3)OCH_2$- and -$CH_2OCH(CH_3)CH_2$-.

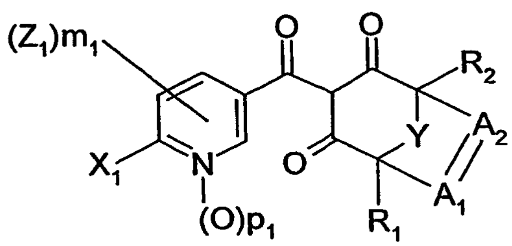
The compounds of formula I may occur in various tautomeric forms such as, for example, when R_3 is hydroxy and Q is Q_1, in formulae I', I'', I''' and I'''', preference being given to formulae I' and I''.



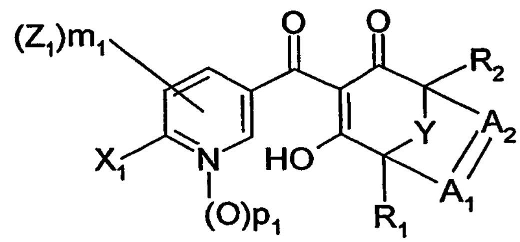
I'



I''



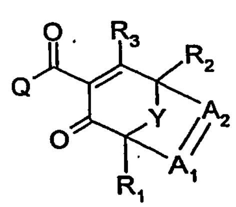
I'''



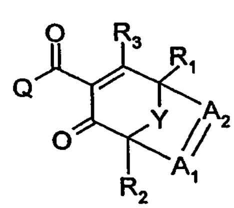
I''''

Since compounds of formula I may also contain asymmetric carbon atoms, for example in the case of R_1, R_2, A_1, A_2 and Y, their substituents R_6, R_7 and R_8, and also in the case of carbon atoms carrying X_1, X_2, X_3, Z_1, Z_2 and Z_3, and accordingly in any sulfoxides, all the stereoisomers and all chiral <R> and <S> forms are also included. Also included are all constitutional isomeric <E> and <Z> forms in respect of any -C=C- and –C=N- double bonds.

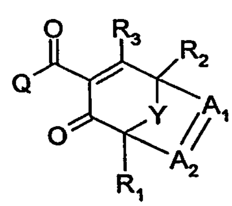
Since R_1 and R_2, like R_7 and R_8 in A_1 and A_2, may each independently of the other have the same or different meanings, the compound of formula I may also occur in various constitutional isomeric forms. The invention therefore relates also to all those constitutional isomeric forms in respect of the spatial arrangement of A_1 and A_2 and the substituents R_1 and R_2 in respect of the substituent R_3 as shown in formulae D_1 to D_4.



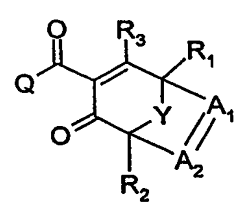
D_1



D_2



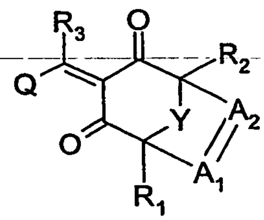
D_3



D_4

The same applies also to the spatial arrangement of the bridging member Y in respect of the carbon atoms carrying R_1 and R_2 when Y is a C_1-C_4alkylene or C_2-C_4alkenylene chain which may be interrupted by oxygen, NR_{5a}, sulfur, sulfonyl, sulfinyl, C(O) or C(=NR_{5b}) and/or mono- or poly-substituted by R_6.

The substituent R_3 may also be located on the bridging member, as has already been shown above in formula I" wherein R_3 is hydroxy. The present invention relates also to those constitutional isomeric forms D_5



(D_5)

of the compounds of formula I.

That arrangement of A_1, A_2, Y and the substituents R_1, R_2, R_4, R_5, R_6, R_7 and R_8 relates accordingly also to all possible tautomeric and stereoisomeric forms of the compounds used as intermediates.

The present invention relates also to the salts which the compounds of formula I are able to form with amines, alkali metal and alkaline earth metal bases or quaternary ammonium bases. Among the alkali metal and alkaline earth metal bases as salt formers, special mention should be made of the hydroxides of lithium, sodium, potassium, magnesium, barium and calcium, but especially the hydroxides of sodium, barium and potassium.

Examples of amines suitable for ammonium salt formation include ammonia as well as primary, secondary and tertiary C_1-C_{18}alkylamines, C_1-C_4hydroxyalkylamines and C_2-C_4-alkoxyalkylamines, for example methylamine, ethylamine, n-propylamine, isopropylamine, the four butylamine isomers, n-amylamine, isoamylamine, hexylamine, heptylamine, octylamine, nonylamine, decylamine, pentadecylamine, hexadecylamine, heptadecylamine, octadecylamine, methylethylamine, methylisopropylamine, methylhexylamine, methylnonylamine, methylpentadecylamine, methyloctadecylamine, ethylbutylamine, ethylheptylamine, ethyloctylamine, hexylheptylamine, hexyloctylamine, dimethylamine, diethylamine, di-n-propylamine, diisopropylamine, di-n-butylamine, di-n-amylamine, diisoamylamine, dihexylamine, diheptylamine, dioctylamine, ethanolamine, n-propanolamine, isopropanolamine, N,N-diethanolamine, N-ethylpropanolamine, N-butylethanolamine, allylamine, n-butenyl-2-amine, n-pentenyl-2-amine, 2,3-dimethylbutenyl-2-amine, dibutenyl-2-amine, n-hexenyl-2-amine, propylenediamine, trimethylamine, triethylamine, tri-n-propylamine, triisopropylamine, tri-n-butylamine, triisobutylamine, tri-sec-butylamine, tri-n-amylamine, methoxyethylamine

and ethoxyethylamine; heterocyclic amines, for example pyridine, quinoline, isoquinoline, morpholine, piperidine, pyrrolidine, indoline, quinuclidine and azepine; primary arylamines, for example anilines, methoxyanilines, ethoxyanilines, o-, m- and p-toluidines, phenylenediamines, benzidines, naphthylamines and o-, m- and p-chloroanilines; but especially triethylamine, isopropylamine and diisopropylamine.

Preferred quaternary ammonium bases suitable for salt formation correspond, for example, to the formula $[N(R_a R_b R_c R_d)]OH$ wherein R_a, R_b, R_c and R_d are each independently of the others C_1-C_4alkyl. Further suitable tetraalkylammonium bases with other anions can be obtained, for example, by anion exchange reactions.

Preference is given to compounds of formula I wherein
R_1, R_2, R_6, R_7 and R_8 are each independently of the others hydrogen, hydroxy, mercapto, NO_2, cyano, halogen, formyl, C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_3-C_6alkenyloxy, C_3-C_6-alkynyloxy, C_3-C_6oxacycloalkyl, C_3-C_6thiacycloalkyl, C_3-C_6dioxacycloalkyl, C_3-C_6dithiacycloalkyl, C_3-C_6oxathiacycloalkyl, C_1-C_6alkoxycarbonyl, C_1-C_6alkylcarbonyl, C_1-C_6alkoxycarbonyloxy, C_1-C_6alkylcarbonyloxy, C_1-C_6alkylthio, C_1-C_6alkylsulfonyl, C_1-C_6alkylsulfinyl, NR_9R_{10}, C_3-C_6cycloalkyl, tri(C_1-C_6alkyl)silyl, tri(C_1-C_6alkyl)silyloxy or Ar_1;
or R_1, R_2, R_6, R_7, R_8 are each independently of the others a C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl or C_3-C_6cycloalkyl group, which may be interrupted by oxygen, sulfur, sulfonyl, sulfinyl, -NR_{11}- or –C(O)- and/or mono-, di- or tri-substituted by hydroxy, mercapto, NO_2, cyano, halogen, formyl, C_1-C_6alkoxy, C_3-C_6alkenyloxy, C_3-C_6alkynyloxy, C_1-C_6haloalkoxy, C_1-C_2alkoxy-C_1-C_2alkoxy, C_1-C_4alkoxycarbonyloxy, C_1-C_4alkylcarbonyloxy, C_1-C_4alkoxycarbonyl, C_1-C_4alkylcarbonyl, C_1-C_6alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6alkylsulfonyl, $NR_{12}R_{13}$, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_6cycloalkyl, tri(C_1-C_6alkyl)silyl, tri(C_1-C_6alkyl)-silyloxy or Ar_2;
or two substituents R_6 at the same carbon atom together form a –CH_2O- or a C_2-C_5alkylene chain, which may be interrupted once or twice by oxygen, sulfur, sulfonyl or sulfinyl and/or mono- or poly-substituted by R_{6c}, with the proviso that two hetero atoms may not be located next to one another;
or two substituents R_6 at different carbon atoms together form an oxygen bridge or a C_1-C_4alkylene chain, which may in turn be substituted by R_{6c};
or R_7 and R_8 together form an oxygen bridge, a –CH=CH-CH=CH- bridge or a C_3-C_4alkylene chain, which may be interrupted by oxygen or –$S(O)_{n1}$- and/or mono- or poly-substituted by R_{6d};

Z_1, Z_2 and Z_3 are each independently of the others C_1-C_3alkoxy-C_1-C_3alkyl-substituted C_3-C_6cycloalkyl, tri(C_1-C_6alkyl)silyl, tri(C_1-C_6alkyl)silyloxy or CH=P(phenyl)$_3$;
or Z_1, Z_2 and Z_3 are a C_1-C_6alkyl, C_2-C_6alkenyl or C_2-C_6alkynyl group, which is interrupted by oxygen, -O(CO)-, -(CO)O-, -O(CO)O-, -N(R_{14})-O-, -O-NR_{15}-, sulfur, sulfinyl, sulfonyl, -SO_2NR_{16}-, -$NR_{17}SO_2$- or –NR_{18}- and is mono- or poly-substituted by L_1;
L_1 is halogen, hydroxy, amino, formyl, nitro, cyano, mercapto, carbamoyl, P(O)(OC_1-C_6alkyl)$_2$, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_1-C_6alkoxycarbonyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_3-C_6cycloalkyl, halo-substituted C_3-C_6-cycloalkyl, C_3-C_6alkenyloxy, C_3-C_6alkynyloxy, C_3-C_6haloalkenyloxy, cyano-C_1-C_6alkoxy, C_1-C_6alkoxy-C_1-C_6alkoxy, C_1-C_6alkylthio-C_1-C_6alkoxy, C_1-C_6alkylsulfinyl-C_1-C_6alkoxy, C_1-C_6alkylsulfonyl-C_1-C_6alkoxy, C_1-C_6alkoxycarbonyl-C_1-C_6alkoxy, C_1-C_6alkylcarbonyloxy-C_1-C_6alkylcarbonyl, C_1-C_6alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylthio, C_1-C_6haloalkylsulfinyl, C_1-C_6haloalkylsulfonyl or oxiranyl, which may in turn be substituted by C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl, or (3-oxetanyl)-oxy, which may in turn be substituted by C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl, or benzoyloxy, benzyloxy, benzylthio, benzylsulfinyl, benzylsulfonyl, C_1-C_6alkylamino, di(C_1-C_6alkyl)amino, $R_{19}S(O)_2O$, $R_{20}N(R_{21})SO_2$-, rhodano, phenyl, phenoxy, phenylthio, phenylsulfinyl, phenylsulfonyl or Ar_4, it being possible for the phenyl-containing groups in turn to be substituted by one or more C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3alkoxy, C_1-C_3haloalkoxy, halogen, cyano, hydroxy or nitro groups;
or, when R_1 and R_2 are hydrogen, methyl, halogen or C_1-C_3alkoxycarbonyl and at the same time Y is other than C_1-C_2alkylene which may be substituted by hydrogen, halogen or methyl, or is other than oxygen, sulfur, sulfonyl, sulfinyl, C(O) or NR_{4a} wherein R_{4a} is hydrogen, C_1-C_4alkyl, formyl or C_1-C_4alkylcarbonyl,
L_1 may additionally be hydrogen and Z_1, Z_2 and Z_3 may additionally be hydrogen, hydroxy, mercapto, NO_2, cyano, halogen, formyl, C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6halo-alkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_1-C_6alkoxycarbonyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylthio, C_1-C_6alkylsulfonyl, C_1-C_6alkylsulfinyl, $NR_{22}R_{23}$, phenyl which may be mono- or poly-substituted by C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3alkoxy, C_1-C_3haloalkoxy, halogen, cyano, hydroxy or nitro, or C_3-C_6cycloalkyl, C_3-C_6cycloalkyl substituted by C_1-C_3alkoxy, C_1-C_3alkoxy-C_1-C_3alkyl or C_1-C_6alkyl, 3-oxetanyl, 3-oxetanyl substituted by C_1-C_3alkoxy, C_1-C_3alkoxy-C_1-C_3alkyl or C_1-C_6alkyl; or Ar_5, O-Ar_6, N(R_{24})Ar_7 or S(O)n_6Ar_8;
R_9, R_{11}, R_{13}, R_{23}, R_{16}, R_{17}, R_{18}, R_{20} and R_{24} are each independently of the others hydrogen, C_1-C_6alkyl, C_1-C_6haloalkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkoxycarbonyl, C_1-C_6alkylsulfonyl, phenyl, it being possible for the phenyl group in turn to be mono- or poly-substituted by

C_1-C_6alkyl, C_1-C_6haloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, halogen, cyano, hydroxy or nitro, or Ar_9;

R_{6a} and R_{6b} are each independently of the other hydrogen or C_1-C_6alkyl; or R_{6a} and R_{6b} together are a C_2-C_5alkylene chain;

R_{6c}, R_{14}, R_{15}, R_{19} and R_{21} are each independently of the others C_1-C_6alkyl or C_1-C_6haloalkyl;

R_{6d}, R_{10}, R_{12} and R_{22} are each independently of the others hydrogen or C_1-C_6alkyl;

Ar_1, Ar_2, Ar_3, Ar_4, Ar_5, Ar_6, Ar_7, Ar_8 and Ar_9 are each independently of the others a five- to ten-membered, monocyclic or fused bicyclic ring system, which may be aromatic, partially saturated or fully saturated and may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen, sulfur, C(O) and C(=NR_{25}), and each ring system contains not more than two oxygen atoms and not more than two sulfur atoms, and each ring system may itself be mono- or poly-substituted by C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_3-C_6alkenyloxy, C_3-C_6alkynyloxy, mercapto, amino, hydroxy, C_1-C_6alkylthio, C_1-C_6haloalkylthio, C_3-C_6alkenylthio, C_3-C_6-haloalkenylthio, C_3-C_6alkynylthio, C_1-C_3alkoxy-C_1-C_3alkylthio, C_1-C_4alkylcarbonyl-C_1-C_3alkylthio, C_1-C_4alkoxycarbonyl-C_1-C_3alkylthio, cyano-C_1-C_3alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6haloalkylsulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylsulfonyl, aminosulfonyl, C_1-C_2alkylaminosulfonyl, N,N-di(C_1-C_2alkyl)aminosulfonyl, di(C_1-C_4alkyl)amino, halogen, cyano, nitro or phenyl, it being possible for the phenyl group in turn to be substituted by hydroxy, C_1-C_6-alkylthio, C_1-C_6haloalkylthio, C_3-C_6alkenylthio, C_3-C_6haloalkenylthio, C_3-C_6alkynylthio, C_1-C_3-alkoxy-C_1-C_3alkylthio, C_1-C_4alkylcarbonyl-C_1-C_3alkylthio, C_1-C_4alkoxycarbonyl-C_1-C_3alkylthio, cyano-C_1-C_3alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6haloalkylsulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylsulfonyl, aminosulfonyl, C_1-C_2alkylaminosulfonyl, N,N-di(C_1-C_2alkyl)aminosulfonyl, di(C_1-C_4alkyl)amino, halogen, cyano or nitro, and the substituents at the nitrogen atom in the heterocyclic ring being other than halogen.

Special mention should be made of compounds of formula I wherein L_1 is hydrogen only when Z_1, Z_2 and Z_3 are a C_1-C_6alkyl group which is interrupted by -O(CO)-, -(CO)O-, -N(R_{14})O-, -ONR$_{15}$-, -SO$_2$NR$_{16}$-, -NR$_{17}$SO$_2$- or –NR$_{18}$-, or is a C_2-C_6alkenyl or C_2-C_6alkynyl group which is interrupted by oxygen, -O(CO)-, -(CO)O-, -O(CO)O-, -N(R_{14})O-, -ONR$_{15}$-, sulfur, sulfinyl, sulfonyl, -SO$_2$NR$_{16}$-, -NR$_{17}$SO$_2$- or –NR$_{18}$-; and when, further, either R_1 and R_2 are hydrogen or methyl, or R_1 is halogen or R_2 is C_1-C_3alkoxycarbonyl, and at the same time Y is other than C_1-C_2alkylene which may be substituted by halogen or methyl, or Y is other than oxygen, sulfur, sulfonyl, sulfinyl, C(O) or NR_{4a} wherein R_{4a} is hydrogen, C_1-C_4alkyl, formyl or C_1-C_4alkylcarbonyl.

An outstanding group of compounds of formula I comprises those compounds wherein Z_1, Z_2, Z_3 are C_1-C_3alkylene which is substituted by the following substituents: halogen, hydroxy, amino, formyl, nitro, cyano, mercapto, carbamoyl, $P(O)(OC_1$-$C_6alkyl)_2$, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_1-C_6alkoxycarbonyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6-haloalkynyl, C_3-C_6cycloalkyl, halo-substituted C_3-C_6cycloalkyl, C_3-C_6alkenyloxy, C_3-C_6alkynyl-oxy, C_3-C_6haloalkenyloxy, cyano-C_1-C_6alkoxy, C_1-C_6alkoxy-C_1-C_6alkoxy, C_1-C_6alkylthio-C_1-C_6alkoxy, C_1-C_6alkylsulfinyl-C_1-C_6alkoxy, C_1-C_6alkylsulfonyl-C_1-C_6alkoxy, C_1-C_6alkoxy-carbonyl-C_1-C_6alkoxy, C_1-C_6alkylcarbonyloxy, C_1-C_6alkylcarbonyl, C_1-C_6alkylthio, C_1-C_6alkyl-sulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylthio, C_1-C_6haloalkylsulfinyl, C_1-C_6haloalkylsulfonyl or oxiranyl, which may in turn be substituted by C_1-C_3alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl, or (3-oxetanyl)-oxy, which may in turn be substituted by C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl, or benzoyloxy, benzyloxy, benzylthio, benzylsulfinyl, benzyl-sulfonyl, C_1-C_6alkylamino, di(C_1-C_6alkyl)amino, $R_{19}S(O)_2O$, $R_{20}N(R_{21})SO_2$-, rhodano, phenyl, phenoxy, phenylthio, phenylsulfinyl, phenylsulfonyl or Ar_4, it being possible for the phenyl-containing groups in turn to be substituted by one or more C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3-alkoxy, C_1-C_3haloalkoxy, halogen, cyano, hydroxy or nitro groups;
or, when R_1 and R_2 are hydrogen, methyl, halogen or C_1-C_3alkoxycarbonyl and at the same time Y is other than C_1-C_2alkylene which may be substituted by halogen or methyl, or is other than oxygen, sulfur, sulfonyl, sulfinyl, C(O) or NR_{4a} wherein R_{4a} is hydrogen, C_1-C_4-alkyl, formyl or C_1-C_4alkylcarbonyl,
L_1 may additionally be hydrogen and Z_1, Z_2 and Z_3 may additionally be hydrogen, hydroxy, mercapto, NO_2, cyano, halogen, formyl, C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6halo-alkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_1-C_6alkoxycarbonyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylthio, C_1-C_6alkylsulfonyl, C_1-C_6alkylsulfinyl, $NR_{22}R_{23}$, phenyl which may be mono- or poly-substituted by C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3alkoxy, C_1-C_3-haloalkoxy, halogen, cyano, hydroxy or nitro, or C_3-C_6cycloalkyl, C_3-C_6cycloalkyl substituted by C_1-C_3alkoxy, C_1-C_3alkoxy-C_1-C_3alkyl or C_1-C_3alkyl, 3-oxetanyl, 3-oxetanyl substituted by C_1-C_3alkoxy, C_1-C_3alkoxy-C_1-C_3alkyl or C_1-C_6alkyl, or Ar_5, O-Ar_6, $N(R_{24})Ar_7$ or $S(O)n_6Ar_8$.

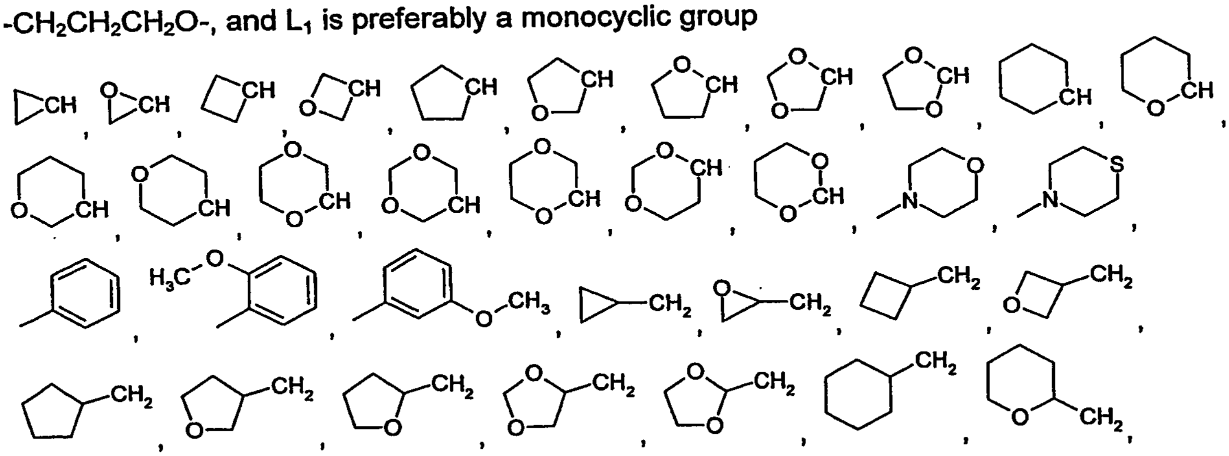
Preferred compounds of formula I are those wherein p is 0. Preferably at least one group Z_1, Z_2 or Z_3 is in the ortho-position relative to the carbonyl group; in preferred compounds, in addition, m_1, m_2 and m_3 are the number 1. Also preferred are compounds of formula I wherein Q is a group Q_1 or Q_2, especially the group Q_1.

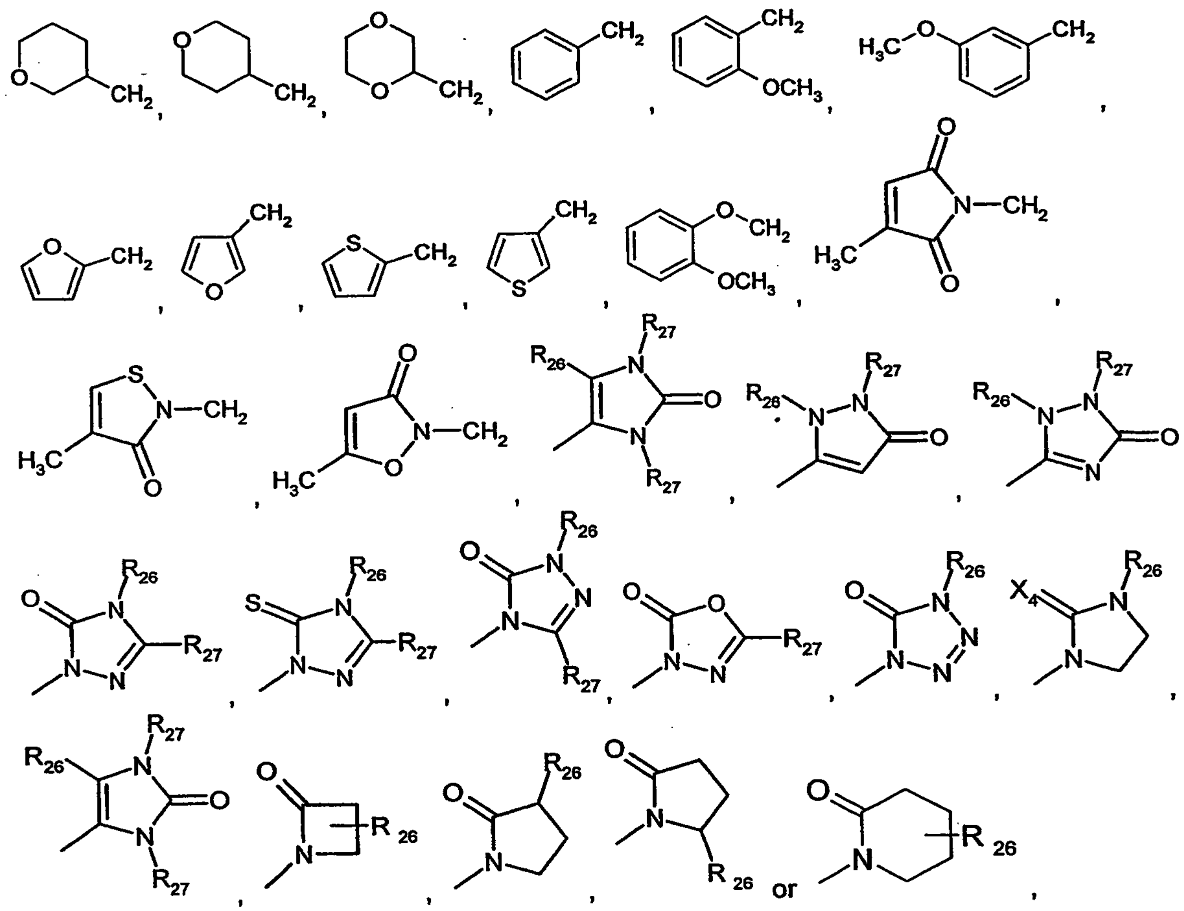
Also preferred are those compounds of formula I wherein Y is oxygen, NCO_2methyl, NSO_2CH_3, $NC(O)CH_3$, sulfur, sulfinyl, sulfonyl, C(O) or a C_1-C_2alkylene chain. Outstanding

compounds are those wherein Y is a C_1-C_2alkylene chain or oxygen, and wherein A_1 is CR_7, A_2 is CR_8 and R_1, R_2, R_6, R_7, R_8 are each independently of the others hydrogen or methyl, especially Y is methylene or ethylene and R_1, R_2, R_6, R_7, R_8 are each hydrogen.

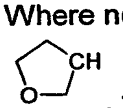
Especially interesting compounds of formula I are those wherein Z_1 is C_1-C_3alkylene which may be interrupted by oxygen, especially a bidentate group of form $-CH_2-$, $-CH_2CH_2-$, $-OCH_2-$, $-OCH_2CH_2-$, $-CH_2O-$, $-CH_2CH_2O-$, $-CH_2OCH_2-$ or $-CH_2CH_2CH_2O-$, and L_1 is preferably hydrogen, halogen, cyano, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_1-C_6alkoxy-C_1-C_6alkoxy. Especially preferred are compounds of formula I wherein Z_1 or Z_1-L_1 is CH_3, CH_2CH_3, $CH_2CH_2CH_3$, $CHC(CH_3)_2$, $CH_2OCH_2CH_2OCH_3$, $CH_2OCH_2CH_2OCH_2CH_3$, CH_2OCH_3, $CH_2OCH_2CH_3$, $CH_2OCH(CH_3)_2$, $CH_2OCH_2CF_3$, $CH_2OCH_2CH{=}CH_2$, CH_2OCH_2CCH, $CH_2OCH_2CCCH_3$, $CH_2OCH_2CH_2CCH$, CH_2OCH_2CN, $CH_2OCH_2C_2CN$, $CH_2OCH_2CH_2CH_2OCH_3$, $CH_2OCH_2CH_2OCH_2CH_2OCH_3$, $CH_2OCH_2CH_2CH_2OCF_3$, $CH_2CH_2OCH_3$, $CH_2CH_2OCH_2CH_3$, $CH_2CH_2CH_2OCH_3$, $CH_2CH_2CH_2OCH_2CH_3$ or $CH_2CH_2OCH_2CH_2OCH_3$, more especially CH_3, $CH_2CH_2CH_2OCH_3$ or $CH_2OCH_2CH_2OCH_3$, especially prominent compounds being those wherein Y is methylene, ethylene or oxygen, A_1 is CR_7, A_2 is CR_8 and R_1, R_2, R_6, R_7, R_8 are each independently of the others hydrogen or methyl. Of that group, preference is given to those compounds wherein Q is Q_1, p_1 is 0 and m_1 is 1, the group $(Z_1)m_1$ is in the ortho-position relative to the carbonyl group, and R_3 is hydroxy.

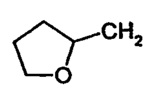
Special emphasis should also be given to compounds of formula I wherein Q is Q_1, Z_1 is C_1-C_3alkylene which may be interrupted by oxygen, Z_1 being especially a bidentate group of form $-CH_2-$, $-CH_2CH_2-$, $-OCH_2-$, $-OCH_2CH_2-$, $-CH_2O-$, $-CH_2CH_2O-$, $-CH_2OCH_2-$ or $-CH_2CH_2CH_2O-$, and L_1 is preferably a monocyclic group

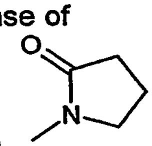




wherein R_{26} is hydrogen or methyl, R_{27} is hydrogen, C_1-C_3alkyl, C_1-C_3alkoxy, C_1-C_3alkylthio or trifluoromethyl and X_4 is oxygen or sulfur.

Where no free valency is indicated in those preferred definitions of L_1, for example as in 

, the linkage site is located at the carbon atom labelled "CH" or in the case of 

at the carbon atom labelled "CH_2" or in a case such as, for example, 

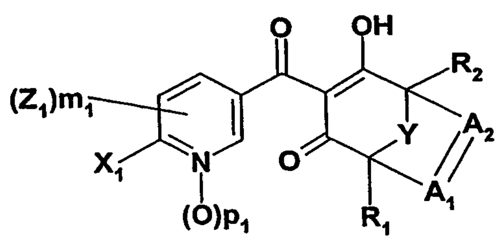
at the bonding site indicated at the bottom left.

In a further preferred group of compounds of formula I, X_1, X_2 and X_3 are C_1-C_3haloalkyl, especially CF_3, CF_2CF_3, CF_2Cl or CF_2H, more especially CF_3 or CF_2H.

An especially preferred group of compounds of formula I comprises those compounds wherein

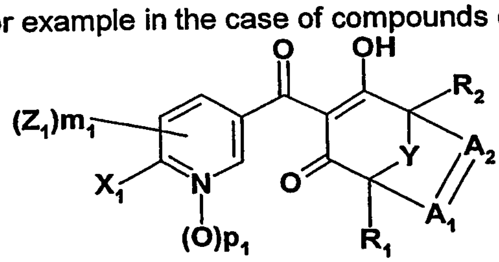
Y is oxygen, $C(=CR_{6a}R_{6b})$ or a C_1-C_4alkylene chain which may be mono- or poly-substituted by R_6;
A_1 is CR_7;
A_2 is CR_8;
R_1, R_2, R_6, R_{6a}, R_{6b}, R_7 and R_8 are each independently of the others hydrogen, C_1-C_6alkyl or C_1-C_6alkoxycarbonyl;
or two substituents R_6 at the same carbon atom together form a C_2-C_5alkylene chain;
R_3 is hydroxy;
Q is the radical Q_1;
p_1 is 0;
m_1 is 1;
X_1 is C_1-C_6haloalkyl;
Z_1 is a C_1-C_6alkyl group which is interrupted by oxygen and is mono- or poly-substituted by L_1; it also being possible for L_1 to be bonded at the terminal carbon atom of the C_1-C_6alkyl group;
or Z_1 is C_1-C_6alkyl;
and L_1 is C_1-C_6alkoxy;
and agronomically acceptable salts/isomers/enantiomers/tautomers of those compounds.

The compounds of formula I can be prepared by means of processes known *per se*, e.g. as described in WO/0039094, as indicated below with reference to the examples of compounds of formula Ia


(Ia),

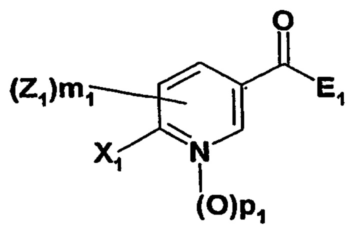
wherein R_1, R_2, A_1, A_2, Y, X_1, Z_1, m_1 and p_1 are as defined above.

In a preferred process, for example in the case of compounds of formula Ia


(Ia),

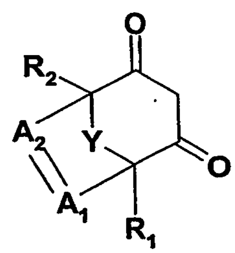
wherein R_1, R_2, A_1, A_2 and Y are as defined above and Q is a group Q_1,

a) a compound of formula Q_1a



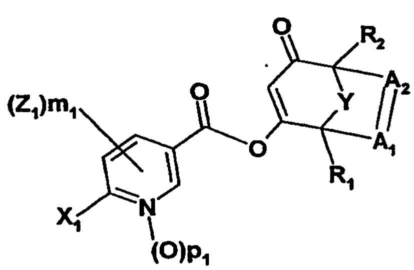
(Q_1a),

wherein Z_1, m_1, X_1 and p_1 are as defined above and E_1 is a leaving group, for example halogen or cyano, is reacted in an inert organic solvent, in the presence of a base, with a compound of formula Da

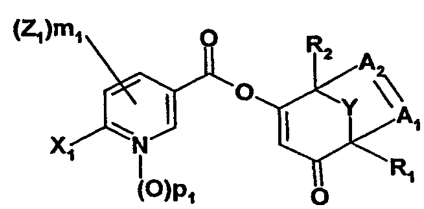


(Da),

wherein Y, R_1, R_2, A_2 and A_1 are as defined for formula I, to form compound(s) of formula IIa and/or IIb



IIa

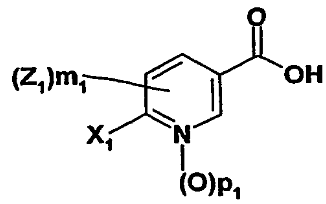


IIb

and the latter is(are) then isomerised, for example in the presence of a base and a catalytic amount of an acylating agent, for example dimethylaminopyridine (DMAP), or a cyanide source, e.g. acetone cyanohydrin, potassium cyanide or trimethylsilyl cyanide;

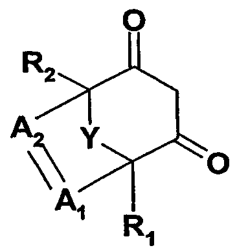
or

b) a compound of formula Q_1b



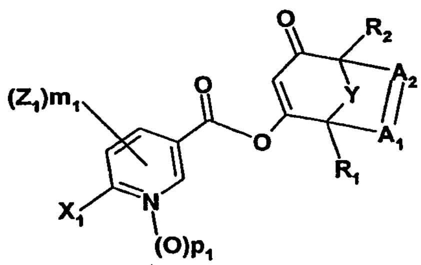
(Q_1b),

wherein Z_1, m_1, p_1 and X_1 are as defined for formula I, is reacted with a compound of formula Da

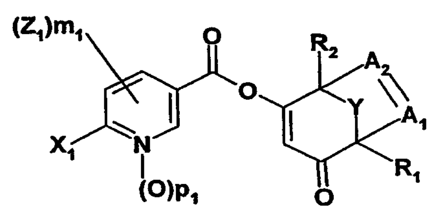


(Da),

wherein Y, R_1, R_2, A_1 and A_2 are as defined for formula I, in an inert organic solvent, in the presence of a base and a coupling reagent, to form compound(s) of formula IIa and/or IIb



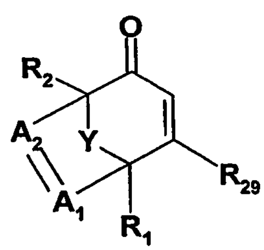
IIa



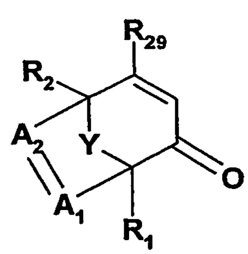
IIb

and the latter is(are) then isomerised, for example as described under Route a).

The intermediates of formulae Da, IIa and IIb are novel and have been developed especially for the preparation of the compounds of formula I. The present invention therefore relates also thereto. The novel intermediates of formulae Da, IIa, IIb correspond, in summary, to the general formulae IIIa and IIIb



(IIIa) and



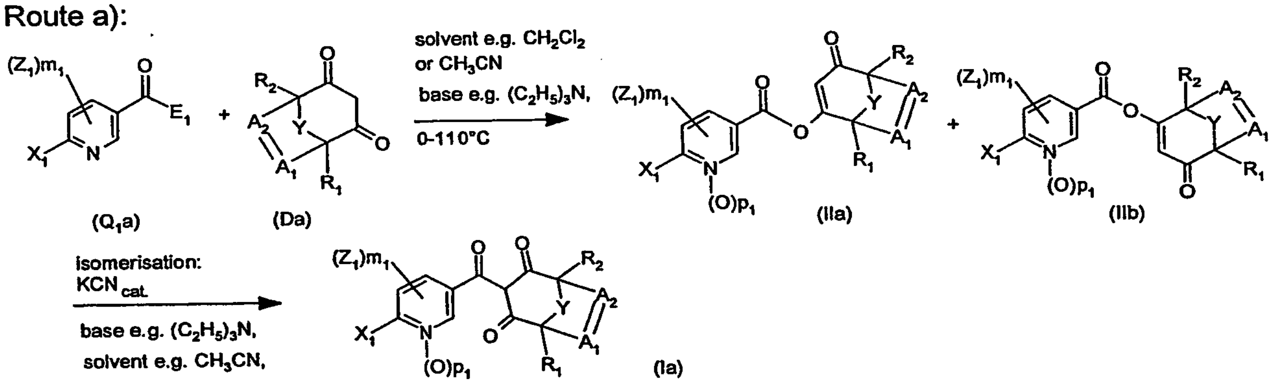
(IIIb),

wherein R_1, R_2, Y, A_1 and A_2 are as defined above and R_{29} is OH or OC(O)Q wherein Q is as defined for formula I.

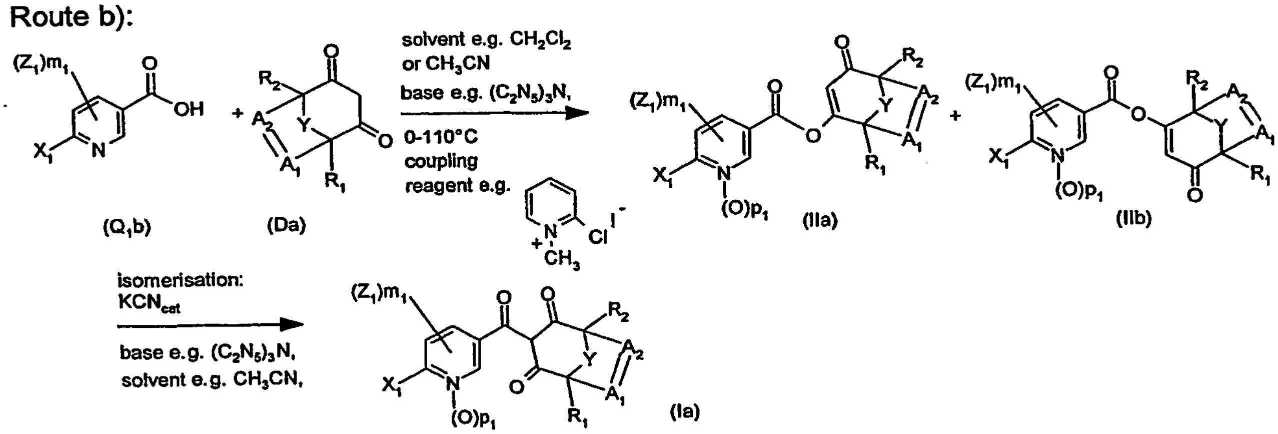
The preparation of the compounds of formula I is illustrated in greater detail in the following Reaction Schemes.

Reaction Scheme 1

Route a):



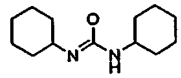
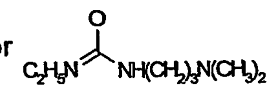
Route b):



According to Reaction Scheme 1 it is preferable to prepare the compounds of formula I having the group Q_1, Q_2 and Q_3 wherein R_3 is hydroxy and p_1, p_2 and p_3 are 0.

Compounds of formula I wherein p_1, p_2 and p_3 are 1, that is to say the corresponding N-oxides of formula I, can be prepared by reacting a compound of formula I wherein p_1, p_2 and p_3 are 0 with a suitable oxidising agent, for example with the H_2O_2-urea adduct in the

presence of an acid anhydride, e.g. trifluoroacetic anhydride. Such oxidations are known in the literature, for example from *J. Med. Chem.*, *32* (12), 2561-73, **1989** or WO 00/15615.

For the preparation of the compounds of formula I wherein Q is the groups Q_1, Q_2 and Q_3 and R_3 is hydroxy, for example in accordance with Reaction Scheme 1, Route a), the carboxylic acid derivatives of formula Q_1a wherein E_1 is a leaving group, e.g. halogen, for example iodine, bromine and especially chlorine, N-oxyphthalimide or N,O-dimethylhydroxylamino, or part of an activated ester, e.g.  (formed from dicyclohexylcarbodiimide (DCC) and the corresponding carboxylic acid) or 

(formed from N-ethyl-N'-(3-dimethylaminopropyl)-carbodiimide (EDC) and the corresponding carboxylic acid) are used as starting materials. They are reacted in an inert, organic solvent, e.g. a halogenated hydrocarbon, for example dichloromethane, a nitrile, for example acetonitrile, or an aromatic hydrocarbon, for example toluene, and in the presence of a base, e.g. an alkylamine, for example triethylamine, an aromatic amine, for example pyridine or 4-dimethylaminopyridine (DMAP), with the dione derivatives of formula Da to form the isomeric enol esters of formula IIa or IIb. That esterification can be carried out at temperatures of from 0°C to 110°C.

The isomerisation of the enol ester derivatives of formulae IIa and IIb to form the derivatives of formula I wherein R_3 is hydroxy can be carried out, for example, analogously to EP-A-0 353 187, EP-A-0 316 491 or WO 97/46530 in the presence of a base. e.g. an alkylamine, for example triethylamine, a carbonate, for example potassium carbonate, and a catalytic amount of DMAP or a catalytic amount of a cyanide source, for example acetone cyanohydrin, potassium cyanide or trimethylsilyl cyanide. The two reaction steps can be carried out *in situ*, especially when a cyanide compound of formula Q_1a (E_1 = cyano) is used, or in the presence of a catalytic amount of acetone cyanohydrin or potassium cyanide, without isolation of the intermediates IIa and IIb.

According to Reaction Scheme 1, Route b), the desired derivatives of formula I wherein R_3 is hydroxy can be obtained e.g. analogously to E. Haslem, *Tetrahedron*, 2409-2433, *36*, 1980 by first preparing enol esters of formula IIa and/or IIb by means of esterification of the carboxylic acids of formula Q_1b with the dione derivatives of formula Da in an inert solvent, for example a halogenated hydrocarbon, for example dichloromethane, a nitrile, for example acetonitrile, or an aromatic hydrocarbon, for example toluene, in the presence of a base, e.g.

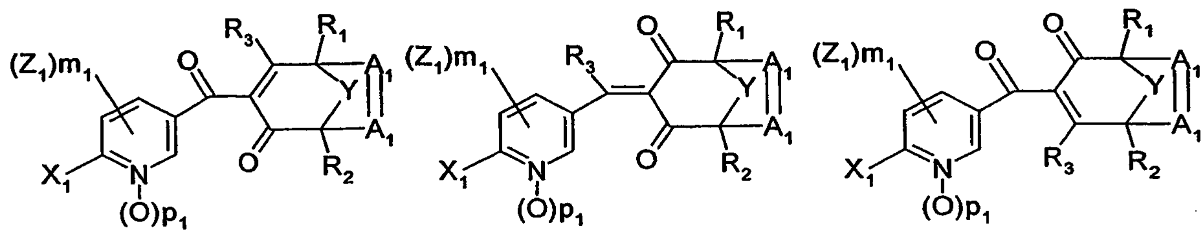
an alkylamine, for example triethylamine, and a coupling agent, for example 2-chloro-1-methyl-pyridinium iodide, which enol esters are then converted *in situ* or in a second step into the compounds of formula I. That reaction takes place, depending upon the solvent used, at temperatures of from 0°C to 110°C and yields first, as described under Route a), the isomeric esters of formulae IIa and IIb, which can be isomerised to the desired derivatives of formula I (R_3 = hydroxy) as described under Route a), for example in the presence of a base and a catalytic amount of DMAP, or a cyanide source, e.g. acetone cyanohydrin.

The activated carboxylic acid derivatives of formula Q_1a in Reaction Scheme 1 (Route a) wherein E_1 is a leaving group, e.g. halogen, for example bromine, iodine or especially chlorine, can be prepared according to known standard methods, as described e.g. in C. Ferri "Reaktionen der organischen Synthese", Georg Thieme Verlag, Stuttgart, 1978, page 460 ff.. Such reactions are generally known and various variations in respect of the leaving group E_1 are described in the literature.

Compounds of formula I wherein R_3 is other than hydroxy or halogen can be prepared in accordance with conversion reactions generally known from the literature by nucleophilic substitution reactions on chlorides of formula I wherein R_3 is chlorine, which are readily obtainable from compounds of formula I wherein R_3 is hydroxy, likewise in accordance with known processes, by reaction with a chlorinating agent, such as phosgene, thionyl chloride or oxalyl chloride. In such a reaction there are used, for example, mercaptans, thiophenols or heterocyclic thiols in the presence of a base, for example 5-ethyl-2-methylpyridine, diisopropyl-ethylamine, triethylamine, sodium hydrogen carbonate, sodium acetate or potassium carbonate.

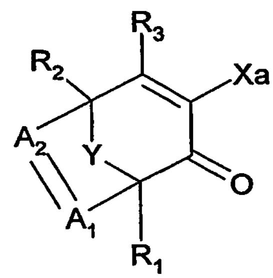
Compounds of formula I wherein the substituent R_3 contains thio groups can be oxidised to the corresponding sulfones and sulfoxides of formula I analogously to known standard methods, e.g. with peracids, for example meta-chloroperbenzoic acid (m-CPBA) or peracetic acid. In that reaction the degree of oxidation at the sulfur atom (SO- or SO_2-) can be controlled by the amount of oxidising agent. Other sulfur-containing groups, for example those in the meanings of R_1, R_2, R_6, R_7, R_8, L_1, X_1, X_2, X_3 or Y, or in alkyl groups and chains interrupted by sulfur, as may occur, for example, in Z_1, Z_2 and Z_3, can be oxidised with a suitable oxidising agent, such as m-CPBA or sodium periodate, to the corresponding sulfone and sulfine (sulfoxido) groups directly in compounds of formula I, as well as in intermediates of formulae IIa, IIb, Da and Db (hereinbelow).

The derivatives of formula I so obtained wherein R_3 is other than hydroxy can also be in various isomeric forms, which can optionally be isolated in pure form. The invention therefore includes all those stereoisomeric forms. Examples of those isomeric forms are the following formulae I', I'' and I''', as shown with reference to compounds of formula I wherein Q is group Q_1.



I' I'' I'''

The compounds of formula Da used as starting materials can be prepared, for example, by treating a compound of formula Db

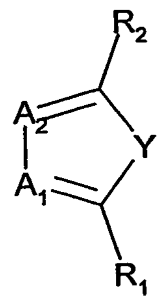


(Db),

wherein A_1, A_2, R_1, R_2 and Y are as defined for formula I, Xa is chlorine or bromine and R_3 is hydroxy or C_1-C_6alkoxy, in the presence of a suitable reducing agent, e.g. tributyltin hydride, or zinc in acetic acid, optionally followed, when R_3 is C_1-C_6alkoxy, by aftertreatment in the presence of a hydrolysing agent, e.g. dilute hydrochloric acid or aqueous p-toluenesulfonic acid.

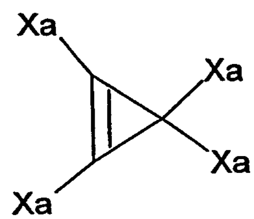
Specifically the compounds of formula Db above wherein R_1 and R_2 are each hydrogen or methyl, A_1 and A_2 are each methylene, Y is oxygen, methylene or ethylene, R_3 is chlorine, bromine or hydroxy and Xa is chlorine or bromine are known from Organic Letters 2002, 4, 1997; Archiv der Pharmazie 1987, 320, 1138; J. Amer. Chem. Soc. 1968, 90 2376 and from US-A-3 538 117 and can be prepared in accordance with the methods described therein.

The compounds of formula Da used as starting materials can accordingly also be prepared very generally in accordance with those known methods, by reacting a dienophilic compound of formula IV



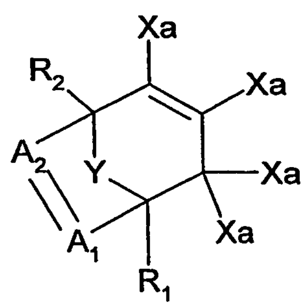
(IV),

wherein A_1, A_2, R_1, R_2 and Y are as defined above, in an inert solvent, such as dichloromethane, 1,2-dichloroethane, toluene or chlorobenzene, optionally at elevated temperature or under elevated pressure, in a reaction similar to a Diels-Alder reaction, with a tetrahalocyclopropene of formula V



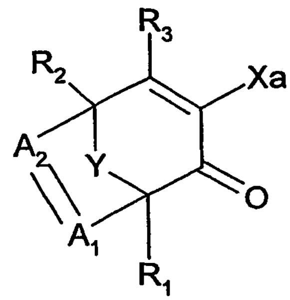
(V),

wherein Xa is chlorine or bromine, and then hydrolysing the resulting bicyclic compound of formula VI



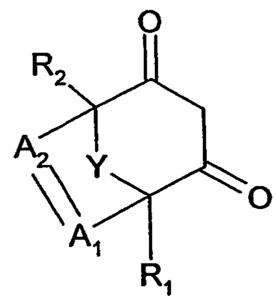
(VI),

wherein A_1, A_2, R_1, R_2, Xa and Y are as defined above, optionally in the presence of a suitable catalyst, for example silver nitrate or the silver tetrafluoroborate salt, or an acid, such as 90-98% sulfuric acid, 90% trifluoroacetic acid or p-toluenesulfonic acid, or reacting it with an alcoholate, for example sodium methanolate, potassium ethanolate or lithium isopropanolate, in order thus to obtain a compound of formula Db



(Db),

wherein A_1, A_2, R_1, R_2, Xa and Y are as defined above, and R_3 depending upon the reaction conditions is either hydroxy, C_1-C_6alkoxy, chlorine or bromine, which is then further reduced and/or hydrolysed to form a novel compound of formula Da



(Da),

wherein A_1, A_2, R_1, R_2 and Y are as defined above.

Compounds of formula VI can thus be reacted further, for example in the presence of 90-98% sulfuric acid at elevated temperature of about 80-100°C, to form compounds of formula Db wherein R_3 is hydroxy and Xa is chlorine or bromine, as described in greater detail in J. Amer. Chem. Soc. 1968, 90, 2376.

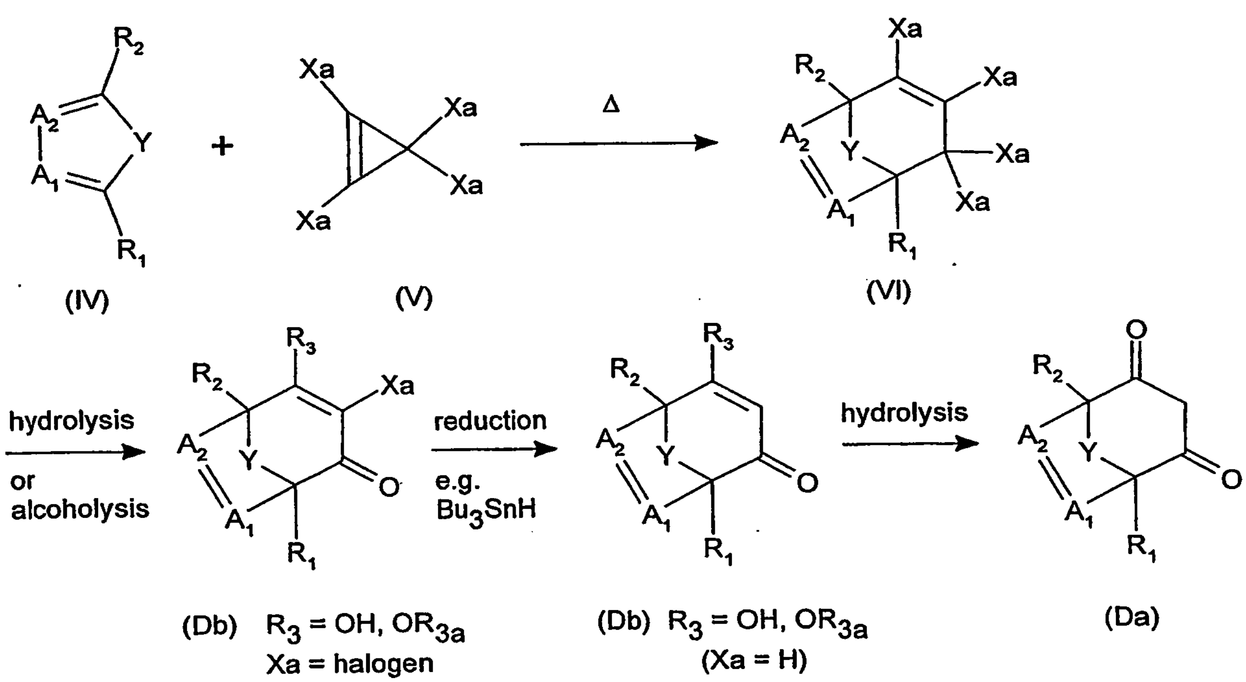
It is also possible for compounds of formula VI to be converted into compounds of formula Db wherein R_3 and Xa are both chlorine or bromine, for example in the presence of 90% trifluoroacetic acid at boiling temperature or in the presence of aqueous silver nitrate at ambient temperature, as described in Archiv der Pharmazie 1987, 320, 1138 and in Organic Letters 2002, 4, 1997.

On the other hand, compounds of formula VI can be converted into compounds of formula Db wherein R_3 is C_1-C_6alkoxy and Xa is chlorine or bromine in good yields at ambient temperature in the presence of alcoholates of formula $R_{3a}O^-M^+$ wherein R_{3a} is accordingly C_1-C_6alkyl and M^+ is an alkali metal salt, in a solvent, such as an alcohol $R_{3a}OH$, toluene or ether, e.g. tetrahydrofuran, dimethoxyethane.

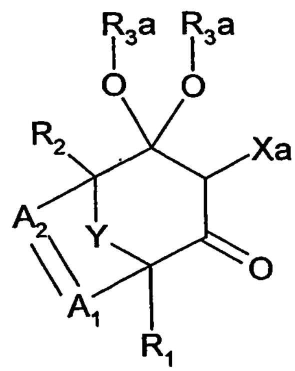
It is also possible for compounds of formula Db wherein Xa is chlorine or bromine and R_3 is hydroxy or C_1-C_6alkoxy to be reduced in the presence of reducing agents, e.g. tributyltin hydride, in an organic solvent, such as toluene or tetrahydrofuran, to form compounds of formula Db wherein Xa is hydrogen, as is well known according to general methods from the literature for the reduction of a halogen in a position adjacent to a carbonyl group (see e.g. *Comprehensive Org. Funct. Group. Transformations*, Vol. 1. ed. S.M. Roberts, Pergamon Press Oxford, **1995**, pages 1-11).

Finally, compounds of formula Db wherein R_3 is C_1-C_6alkoxy, chlorine or bromine and Xa is hydrogen can be hydrolysed to compounds of formula Da in the presence of acids, e.g. dilute hydrochloric acid, dilute sulfuric acid or p-toluenesulfonic acid.

The general reaction sequences for the preparation of compounds of formulae Da and Db from compounds of formulae IV and V *via* intermediates of formula VI are shown in the following Scheme.

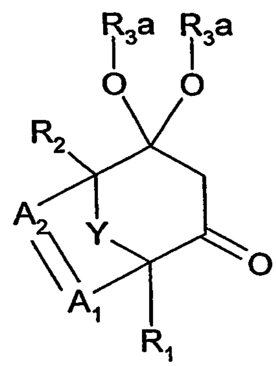


In the reaction of compounds of formula VI and/or Db wherein A_1, A_2, R_1, R_2, Xa and Y are as defined above and R_3 is C_1-C_6alkoxy with alcoholates of formula $R_{3a}O^-M^+$, it is also possible for compounds of formula VII to be formed



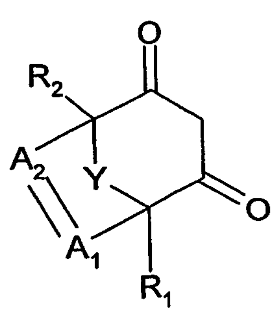
(VII),

wherein A_1, A_2, R_1, R_2, Xa and Y are as defined above and R_{3a} is C_1-C_6alkyl or, when glycol is used, two R_{3a} together are $-CH_2CH_2-$. Those compounds too can be reacted under the reduction conditions mentioned above, for example with tributyltin hydride or with zinc in the presence of acetic acid, by way of a compound of formula VIIa

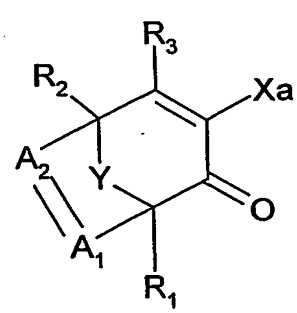


(VIIa),

wherein A_1, A_2, R_1, R_2, R_{3a} and Y are as defined above, and subsequent hydrolysis, for example with dilute hydrochloric acid or a catalytic amount of p-toluenesulfonic acid in water, to form the compounds of formulae Da and Db

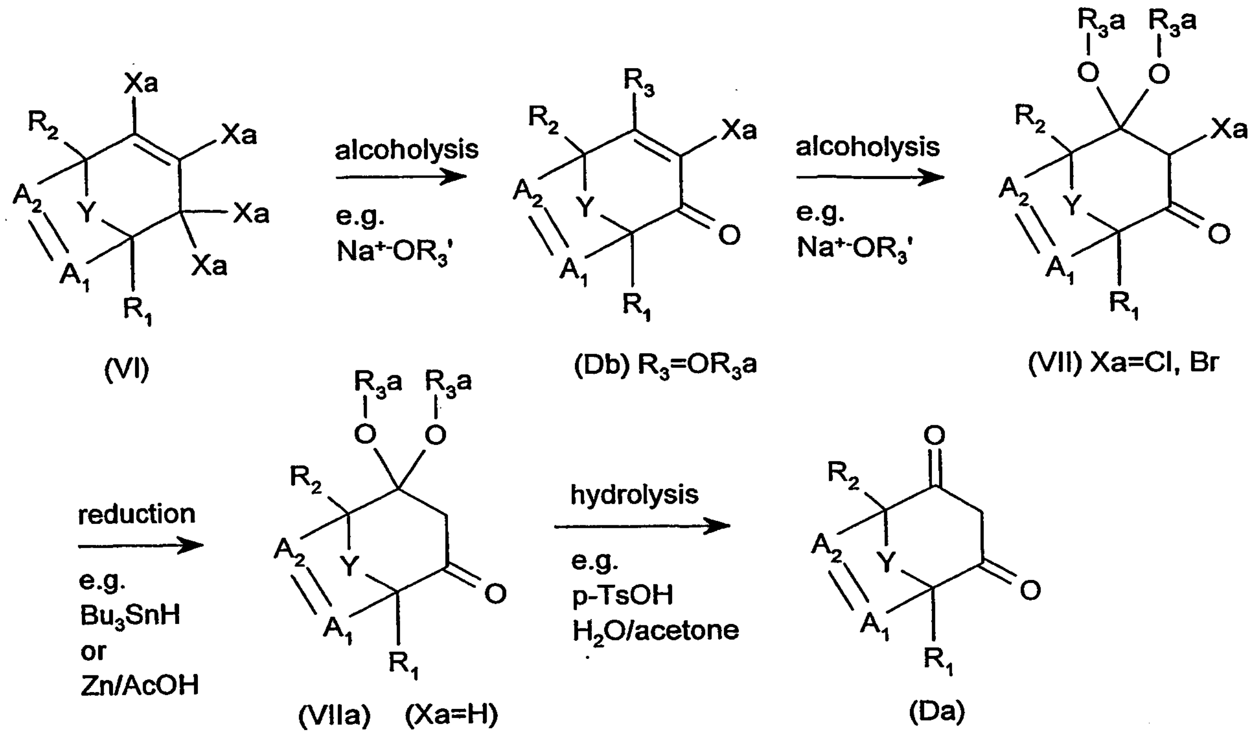


(Da)

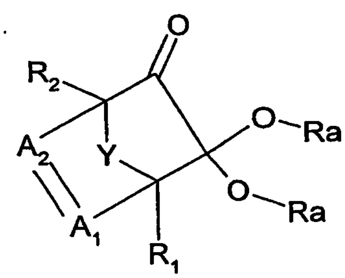


(Db)

wherein A_1, A_2, R_1, R_2 and Y are as defined above and R_3 is hydroxy and Xa is hydrogen, as is shown generally in the following Scheme.



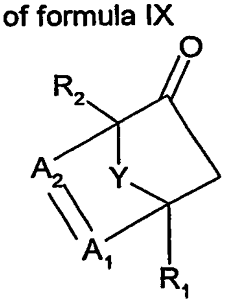
In a further process, compounds of formula Da can also be prepared either by conversion of a compound of formula VIII



(VIII),

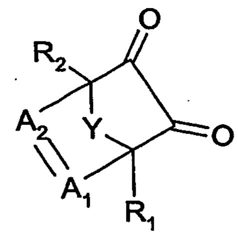
wherein R_1, R_2, A_1, A_2, Y are as defined above and Ra is C_1-C_6alkyl or, when glycol is used, two R_{3a} together are $-CH_2CH_2-$, by hydrolysis, e.g. by treatment with an aqueous acid, Route c),

or by conversion of a compound of formula IX



(IX),

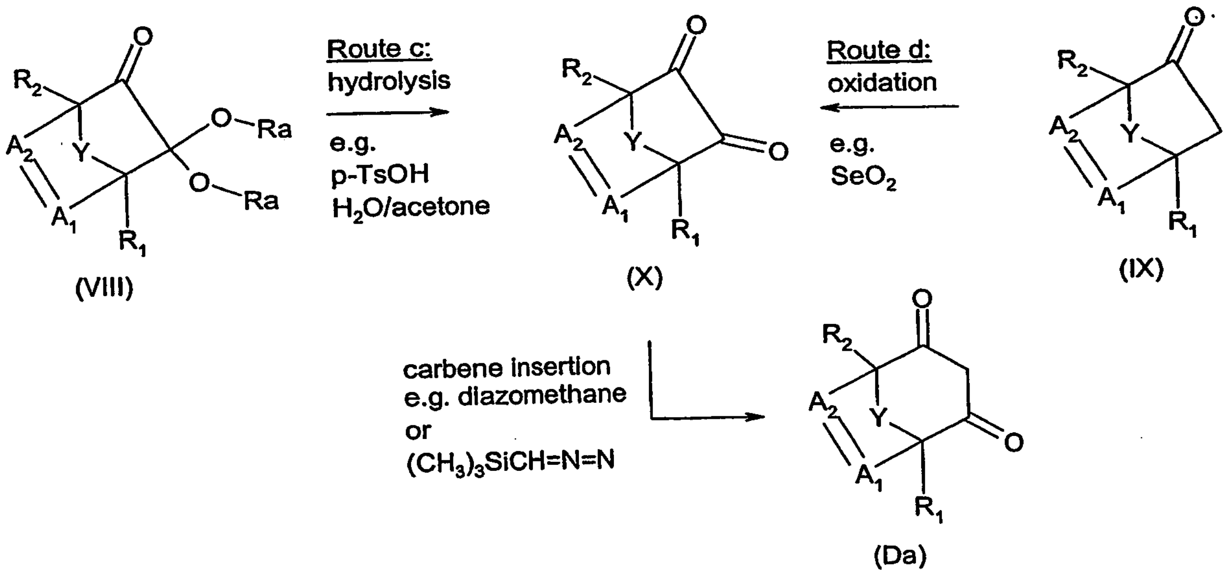
wherein R_1, R_2, A_1, A_2, Y are as defined above, by means of oxidation, e.g. with selenium dioxide, Route d), first into a diketo compound of formula X



(X),

wherein R_1, R_2, A_1, A_2, Y are as defined above, and subsequent conversion of that compound by carbene insertion, e.g. with diazomethane or with trimethylsilyl-diazomethane, into the 1,3-dione compound Da.

Those processes are also known *per se* to the person skilled in the art; the compounds can be prepared, depending upon the functionality of the groups R_1, R_2, A_1, A_2 and Y, by general reaction routes shown in the following Scheme:



Using such routes it is readily possible to obtain, in particular, those compounds of formula VIII wherein Y is a C_2alkylene chain substituted by R_6, wherein R_6 is for example alkoxy, benzyloxy, alkylcarbonyl, alkoxycarbonyl, alkylthio or alkylsulfonyl.

Methods of obtaining the starting compounds of formula VIII used in the above-mentioned process are known, for example, from Acc. Chem. Res. 2002, 856; J.O.C. 2002, *67*, 6493; Organic Letters 2002, 2477; Synlett, 2002, 1520; Chem. Commun. 2001, 1624; Synlett,

2000, 421; Tetrahedron Letters, 1999, 8431; J.O.C. 1999, *64*, 4102; J.A.C.S. 1998, *129*, 13254; Tetrahedron Letters, 1998, 659; Synlett, 1997, 1351. Methods of obtaining the starting compounds of formula IX are described, for example, in Org. Lettr. 2002, 2063; Synthetic Commun. 2001, 707; J.A.C.S. 2001, *123*, 1569; Synlett, 1999, 225; Synlett, 1997, 786; Tetrahedron Letters, 1996, 7295; Synthesis, 1995, 845. Compounds of formula X are known, for example, from Synthesis, 2000, 850.

The transformations according to Route d) are likewise known, for example from Tetr. 1986, *42*, 3491. Oxidation is preferably carried out with selenium dioxide in a solvent, such as acetic acid, at temperatures of from about 20°C to about 120°C and the carbene insertion with diazomethane is preferably effected at from about -40°C to about 50°C in a solvent, such as dichloromethane or diethyl ether. The carbene insertion can also be carried out with trimethylsilyldiazomethane, it having proved advantageous to work in the presence of a Lewis acid catalyst, such as boron trifluoride etherate, for example at temperatures of from about –15°C to about +25°C.

In principle, however, the compounds of formulae Da, Db, VII, VIIa, VIII, IX and X used as starting materials and as intermediates can be prepared, in dependence upon the substituent pattern A_1, A_2, R_1, R_2 and Y and also in dependence upon the availability of the starting materials, according to any desired methods and reaction routes, there being no limitation in respect of the process variants indicated above.

The compounds of formula Da wherein R_1, R_2, A_1, A_2 and Y are as defined above, and also compounds of formula Db wherein R_1, R_2, A_1, A_2 and Y are as defined above and R_3 is chlorine, bromine, hydroxy or C_1-C_6alkoxy and Xa is hydrogen, chlorine or bromine, with the exception of the compounds 3-chloro-8-oxa-bicyclo[3.2.1]oct-6-ene-2,4-dione; 3-chloro-bicyclo[3.2.1]oct-6-ene-2,4-dione; 3-chloro-4-hydroxy-bicyclo[3.2.1]octa-3,6-dien-2-one; 3,4-dibromo-8-oxa-bicyclo[3.2.1]octa-3,6-dien-2-one; 3,4-dibromo-1,5-dimethyl-8-oxa-bicyclo-[3.2.1]octa-3,6-dien-2-one; 3,4-dibromo-bicyclo[3.2.1]octa-3,6-dien-2-one; 3,4-dichloro-8-oxa-bicyclo[3.2.1]octa-3,6-dien-2-one; 3,4-dichloro-bicyclo[3.2.1]octa-3,6-dien-2-one and 7,8-dibromo-5,9-dihydro-5,9-methano-benzocyclohepten-6-one, and also the compounds of formula VII are novel and constitute valuable intermediates for the preparation of compounds of formula I. The present invention accordingly relates likewise thereto.

The compounds of formulae Q_{1a}, Q_{2a} and Q_{3a} used as starting materials and their corresponding acids Q_{1b}, Q_{2b} and Q_{3b} are known from the publications WO 00/15615 and WO 01/94339 or can be prepared in accordance with the methods described therein.

The compounds of formula V used as starting material are likewise known, for example from Synthesis 1987, 260 and from J. Amer. Chem. Soc. 1968, 90 2376.

A large number of known standard methods are available for the preparation of all further compounds of formula I functionalised in accordance with the definition of A_1, A_2, R_1, R_2, Y and Q, for example alkylation, halogenation, acylation, amidation, oximation, oxidation and reduction, the choice of a suitable preparation process being governed by the properties (reactivities) of the substituents in question in the respective intermediates of formulae I, Da, Db, VI, VII and VIIa, and especially the starting materials of formulae IV and V and Q_{1b}, Q_{2b} and Q_{3b}.

The reactions to form compounds of formula I are advantageously carried out in aprotic, inert organic solvents. Such solvents are hydrocarbons, such as benzene, toluene, xylene or cyclohexane, chlorinated hydrocarbons, such as dichloromethane, trichloromethane, tetrachloromethane or chlorobenzene, ethers, such as diethyl ether, ethylene glycol dimethyl ether, diethylene glycol dimethyl ether, tetrahydrofuran or dioxane, nitriles, such as acetonitrile or propionitrile, amides, such as N,N-dimethylformamide, diethylformamide or N-methylpyrrolidinone. The reaction temperatures are preferably from -20°C to +120°C. The reactions generally proceed slightly exothermically and can generally be carried out at room temperature. In order to shorten the reaction time or to initiate the reaction, brief heating, up to the boiling point of the reaction mixture, can be carried out. The reaction times can likewise be shortened by the addition of a few drops of base as reaction catalyst. Suitable bases are especially tertiary amines, such as trimethylamine, triethylamine, quinuclidine, 1,4-diazabicyclo[2.2.2]octane, 1,5-diazabicyclo[4.3.0]non-5-ene or 1,5-diazabicyclo[5.4.0]undec-7-ene. It is also possible, however, to use as bases inorganic bases, such as hydrides, e.g. sodium or calcium hydride, hydroxides, e.g. sodium or potassium hydroxide, carbonates, e.g. sodium or potassium carbonate, or hydrogen carbonates, e.g. potassium or sodium hydrogen carbonate. The bases can be used as such or alternatively with catalytic amounts of a phase transfer catalyst, e.g. crown ethers, especially 18-crown-6, or tetraalkylammonium salts.

The end products of formula I can be isolated in conventional manner by concentration or

evaporation of the solvent and purified by recrystallisation or trituration of the solid residue in solvents in which they are not readily soluble, such as ethers, aromatic hydrocarbons or chlorinated hydrocarbons, by distillation or by means of column chromatography or by means of the HPLC technique using a suitable eluant.

The sequence in which the reactions should be carried out in order as far as possible to avoid secondary reactions will be familiar to the person skilled in the art. Unless the synthesis is specifically aimed at the isolation of pure isomers, the product may be obtained in the form of a mixture of two or more isomers, for example chiral centres in the case of alkyl groups or cis/trans isomerism in the case of alkenyl groups or <E> or <Z> forms. All such isomers can be separated by methods known *per se*, for example chromatography, crystallisation, or produced in the desired form by means of a specific reaction procedure.

For the use according to the invention of the compounds of formula I, or of compositions comprising them, there come into consideration all methods of application customary in agriculture, for example pre-emergence application, post-emergence application and seed dressing, and also various methods and techniques such as, for example, the controlled release of active ingredient. For that purpose a solution of the active ingredient is applied to mineral granule carriers or polymerised granules (urea/formaldehyde) and dried. If required, it is additionally possible to apply a coating (coated granules), which allows the active ingredient to be released in metered amounts over a specific period of time.

The invention therefore relates also to a herbicidal and plant-growth-inhibiting composition comprising a herbicidally effective amount of a compound of formula I according to claim 1 on an inert carrier.

The compounds of formula I can be used as herbicides in unmodified form, that is to say as obtained in the synthesis, but they are preferably formulated in customary manner together with the adjuvants conventionally employed in formulation technology e.g. into emulsifiable concentrates, directly sprayable or dilutable solutions, dilute emulsions, suspensions, mixtures of a suspension and an emulsion (suspoemulsions), wettable powders, soluble powders, dusts, granules or microcapsules. Such formulations are described, for example, on pages 9 to 13 of WO 97/34485. As with the nature of the compositions, the methods of application, such as spraying, atomising, dusting, wetting, scattering or pouring, are selected in accordance with the intended objectives and the prevailing circumstances.

The formulations, that is to say the compositions, preparations or mixtures comprising the compound (active ingredient) of formula I or at least one compound of formula I and, usually, one or more solid or liquid formulation adjuvants, are prepared in known manner, e.g. by homogeneously mixing and/or grinding the active ingredients with the formulation adjuvants, for example solvents or solid carriers. Surface-active compounds (surfactants) may also be used in addition in the preparation of the formulations. Examples of solvents and solid carriers are given, for example, on page 6 of WO 97/34485.

Depending upon the nature of the compound of formula I to be formulated, suitable surface-active compounds are non-ionic, cationic and/or anionic surfactants and surfactant mixtures having good emulsifying, dispersing and wetting properties.

Examples of suitable anionic, non-ionic and cationic surfactants are listed, for example, on pages 7 and 8 of WO 97/34485.

In addition, the surfactants conventionally employed in formulation technology, which are described, *inter alia*, in "McCutcheon's Detergents and Emulsifiers Annual" MC Publishing Corp., Ridgewood New Jersey, 1981, Stache, H., "Tensid-Taschenbuch", Carl Hanser Verlag, Munich/Vienna 1981, and M. and J. Ash, "Encyclopedia of Surfactants", Vol. I-III, Chemical Publishing Co., New York, 1980-81, are also suitable for the preparation of the herbicidal compositions according to the invention.

The compositions according to the invention can additionally include an additive comprising an oil of vegetable or animal origin, a mineral oil, alkyl esters thereof or mixtures of such oils and oil derivatives.

The amount of oil additive in the composition according to the invention is generally from 0.01 to 2 %, based on the spray mixture. For example, the oil additive can be added to the spray tank in the desired concentration after the spray mixture has been prepared.

Preferred oil additives comprise mineral oils or an oil of vegetable origin, for example rapeseed oil, olive oil or sunflower oil, emulsified vegetable oil, such as AMIGO® obtainable from Rhône-Poulenc Canada Inc., alkyl esters of oils of vegetable origin, for example the methyl derivatives, or an oil of animal origin, such as fish oil or beef tallow. A preferred additive contains as active components essentially 80 % by weight alkyl esters of fish oils

and 15 % by weight methylated rapeseed oil, and also 5 % by weight of customary emulsifiers and pH modifiers.

Especially preferred oil additives comprise alkyl esters of higher fatty acids (C_8-C_{22}), especially the methyl derivatives of C_{12}-C_{18} fatty acids, for example the methyl esters of lauric acid, palmitic acid and oleic acid. Those esters are known as methyl laurate (CAS-111-82-0), methyl palmitate (CAS-112-39-0) and methyl oleate (CAS-112-62-9). A preferred fatty acid methyl ester derivative is Emery® 2230 and 2231 (Henkel subsidiary Cognis GMBH, DE).

The application and action of the oil additives can be improved by combining them with surface-active substances, such as non-ionic, anionic or cationic surfactants. Examples of suitable anionic, non-ionic and cationic surfactants are listed on pages 7 and 8 of WO 97/34485.

Preferred surface-active substances are anionic surfactants of the dodecylbenzylsulfonate type, especially the calcium salts thereof, and also non-ionic surfactants of the fatty alcohol ethoxylate type. Special preference is given to ethoxylated C_{12}-C_{22} fatty alcohols having a degree of ethoxylation of from 5 to 40. Examples of commercially available, preferred surfactants are the Genapol types (Clariant AG, Muttenz, Switzerland). Also preferred for use as surface-active substances are silicone surfactants, especially polyalkyl-oxide-modified heptamethyltrisiloxanes, such as are commercially available as e.g. Silwet L-77®, and also perfluorinated surfactants. The concentration of surface-active substances in relation to the total additive is generally from 1 to 30 % by weight.

Examples of oil additives that consist of mixtures of oils or mineral oils or derivatives thereof with surfactants are Edenor ME SU®, Turbocharge® (Zeneca Agro, Stoney Creek, Ontario, CA) and Actipron® (BP Oil UK Limited, GB).

The addition of an organic solvent to the oil additive/surfactant mixture can also bring about a further enhancement of action. Suitable solvents are, for example, Solvesso® (ESSO) and Aromatic Solvent® (Exxon Corporation) types.
The concentration of such solvents can be from 10 to 80 % by weight of the total weight.

Such oil additives, which are also described, for example, in US-A-4 834 908, are suitable for the composition according to the invention. A commercially available oil additive is known by the name MERGE®, is obtainable from the BASF Corporation and is essentially described,

for example, in US-A-4 834 908 in col. 5, as Example COC-1. A further oil additive that is preferred according to the invention is SCORE® (Novartis Crop Protection Canada.)

In addition to the oil additives listed above, in order to enhance the action of the compositions according to the invention it is also possible for formulations of alkyl pyrrolidones, such as are commercially available e.g. as Agrimax®, to be added to the spray mixture. Formulations of synthetic latices, such as, for example, polyacrylamide, polyvinyl compounds or poly-1-p-menthene, such as are commercially available as e.g. Bond®, Courier® or Emerald®, can also be used to enhance action. Solutions that contain propionic acid, for example Eurogkem Pen-e-trate®, can also be added as action-enhancing agent to the spray mixture.

The herbicidal formulations generally contain from 0.1 to 99 % by weight, especially from 0.1 to 95 % by weight, of herbicide, from 1 to 99.9 % by weight, especially from 5 to 99.8 % by weight, of a solid or liquid formulation adjuvant, and from 0 to 25 % by weight, especially from 0.1 to 25 % by weight, of a surfactant. Whereas commercial products will preferably be formulated as concentrates, the end user will normally employ dilute formulations. The compositions may also comprise further ingredients, such as stabilisers, for example vegetable oils or epoxidised vegetable oils (epoxidised coconut oil, rapeseed oil or soybean oil), anti-foams, for example silicone oil, preservatives, viscosity regulators, binders, tackifiers, and also fertilisers or other active ingredients.

The compounds of formula I are generally applied to the plant or to the locus thereof at rates of application of from 0.001 to 4 kg/ha, especially from 0.005 to 2 kg/ha. The concentration required to achieve the desired effect can be determined by experiment. It is dependent upon the nature of the action, the stage of development of the cultivated plant and of the weed and on the application (place, time, method) and may vary within wide limits as a function of those parameters.

The compounds of formula I are distinguished by herbicidal and growth-inhibiting properties, allowing them to be used in crops of useful plants, especially cereals, cotton, soybeans, sugar beet, sugar cane, plantation crops, rape, maize and rice, and also for non-selective weed control. The term "crops" is to be understood as including also crops that have been rendered tolerant to herbicides or classes of herbicides (such as, for example, HPPD inhibitors, ALS inhibitors, EPSPS (5-enol-pyrovyl-shikimate-3-phosphate-synthase) inhibitors, GS (glutamine synthetase) inhibitors) as a result of conventional methods of

breeding or genetic engineering. An example of a crop that has been rendered tolerant to imidazolinones, e.g. imazamox, by conventional methods of breeding (mutagenesis) is Clearfield® summer rape (Canola). Examples of crops that have been rendered tolerant to herbicides or classes of herbicides by genetic engineering methods include glyphosate- and glufosinate-resistant maize varieties commercially available under the trade names RoundupReady® and LibertyLink®.

Crops are also to be understood as being those which have been rendered resistant to harmful insects by genetic engineering methods, for example Bt maize (resistant to European corn borer), Bt cotton (resistant to cotton boll weevil) and also Bt potatoes (resistant to the Colorado beetle). Examples of Bt maize are the Bt 176 maize hybrids of NK® (Syngenta Seeds). The Bt toxin is a protein that is formed naturally by *Bacillus thuringiensis* soil bacteria. Examples of toxins, or transgenic plants able to synthesise such toxins, are described in EP-A-0 451 878, EP-A-0 374 753, WO 93/07278, WO 95/34656 and EP-A-0 427 529.

Plant crops or seed material thereof can be both herbicide-tolerant and at the same time resistant to insect feeding ("stacked" transgenic events).

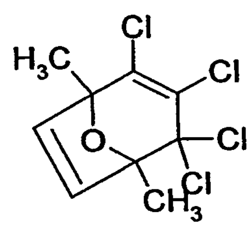
The weeds to be controlled may be both monocotyledonous and dicotyledonous weeds, such as, for example, Stellaria, Nasturtium, Agrostis, Digitaria, Avena, Setaria, Sinapis, Lolium, Solanum, Echinochloa, Scirpus, Monochoria, Sagittaria, Bromus, Alopecurus, Sorghum halepense, Rottboellia, Cyperus, Abutilon, Sida, Xanthium, Amaranthus, Chenopodium, Ipomoea, Chrysanthemum, Galium, Viola and Veronica.

The compositions according to the invention may additionally comprise growth regulators, for example trinexapac (744), chlormequat chloride (129), clofencet (148), cyclanilide (170), ethephon (281), flurprimidol (355), gibberellic acid (379), inabenfide (421), maleic hydrazide (449), mefluidide (463), mepiquat chloride (465), paclobutrazol (548), prohexadione-calcium (595), uniconazole (746) or thidiazuron (703). It is also possible for a composition according to the invention to comprise fungicides, for example azoxystrobin (43), epoxiconazole (48), benomyl (60), bromuconazole (89), bitertanol (77), carbendazim (107), cyproconazole (189), cyprodinil (190), diclomezine (220), difenoconazole (228), diniconazole (247), epoxiconazole (48), ethirimol (284), etridiazole (294), fenarimol (300), fenbuconazole (302), fenpiclonil (311), fenpropidin (313), fenpropimorph (314), ferimzone (321), fludioxonil (334), fluquinconazole (349), flutolanil (360), flutriafol (361), imazalil (410), ipconazole (426),

iprodione (428), isoprothiolane (432), kasugamycin (438), kresoxim-methyl (439), spiroxamine (441), mepronil (466), myclobutanil (505), nuarimol (528), pefurazoate (554), pencycuron (556), phthalide (576), probenazole (590), prochloraz (591), propiconazole (607), pyrazophos (619), pyroquilone (633), quinoxyfen (638), quintozene (639), tebuconazole (678), tetraconazole (695), thiabendazole (701), thifluzamide (705), triadimefon (720), triadimenol (721), tricyclazole (734), tridemorph (736), triflumizole (738), triforine (742), triticonazole (745) or vinclozolin (751). The number in brackets after each active ingredient refers to the entry number of that active ingredient in the Pesticide Manual, eleventh ed., British Crop Protection Council, 1997.

The following Examples further illustrate the invention but do not limit the invention.

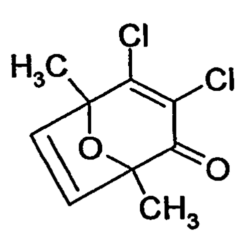
Preparation Example 1: Preparation of 2,3,4,4-tetrachloro-1,5-dimethyl-8-oxa-bicyclo-[3.2.1]octa-2,6-diene:



6.49 g (67.48 mmol) of 2,5-dimethylfuran and 10 g (56.23 mmol) of tetrachlorocyclopropene are heated at boiling temperature in 70 ml of toluene for 16 hours. The toluene and excess 2,5-dimethylfuran are then removed under reduced pressure. The product, 14.77 g (95.9% of theory) of 2,3,4,4-tetrachloro-1,5-dimethyl-8-oxa-bicyclo[3.2.1]octa-2,6-diene, which remains behind in the form of an oil, can be transferred to the next reaction step without further purification (^{1}H NMR).

^{1}H NMR (300 MHz; $CDCl_3$) δ 6.50 (d, 1H); 6.15 (d, 1H); 1.82 (s, 3H); 1.63 (s, 3H).

Preparation Example P2: Preparation of 3,4-dichloro-1,5-dimethyl-8-oxa-bicyclo[3.2.1]octa-3,6-dien-2-one:

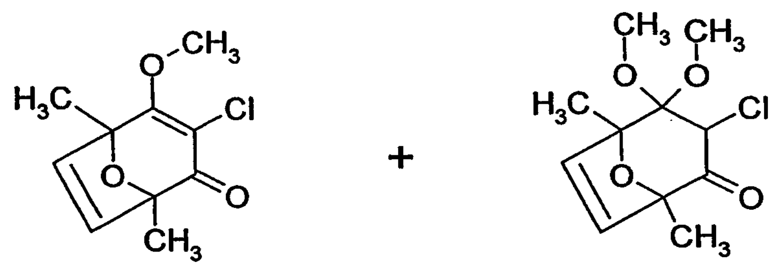


14 g (51.1 mmol) of unpurified 2,3,4,4-tetrachloro-1,5-dimethyl-8-oxa-bicyclo[3.2.1]octa-2,6-diene and 17.36 g (102.2 mmol) of silver nitrate are dissolved in 500 ml of acetone/water 1:1

mixture and heated for 15 hours at a temperature of 65-70°C until the reaction of the reactants is complete (thin-layer chromatography (TLC) monitoring (mobile phase hexane / ethyl acetate 4:1)). After the reaction mixture has cooled to ambient temperature, solid sodium hydrogen carbonate is then stirred into the mixture in portions in order to neutralise the nitric acid. The precipitated silver bromide is filtered off and most of the acetone is distilled off under reduced pressure. The aqueous phase that remains behind is extracted three times with ethyl acetate. The organic extract is washed with water, dried over sodium sulfate and concentrated by evaporation. The oily residue is purified by means of silica gel chromatography (eluant gradient: 3-50% ethyl acetate in hexane). 6.1 g (54%) of pure 3,4-dichloro-1,5-dimethyl-8-oxa-bicyclo[3.2.1]octa-3,6-dien-2-one are obtained in the form of a pale yellow solid.

^{1}H NMR (300 MHz; $CDCl_3$) δ 6.65 (d, 1H); 6.23 (d, 1H); 1.72 (s, 3H); 1.61 (s, 3H).

Preparation Example P3: Preparation of 3-chloro-1,5-dimethyl-4-methoxy-8-oxa-bicyclo-[3.2.1]octa-3,6-dien-2-one and 3-chloro-4,4-dimethoxy-1,5-dimethyl-8-oxa-bicyclo[3.2.1]oct-6-en-2-one:



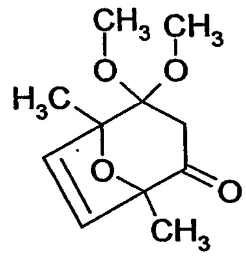
6.0 g (27.39 mmol) of 3,4-dichloro-1,5-dimethyl-8-oxa-bicyclo[3.2.1]octa-3,6-dien-2-one is introduced into 39 ml of anhydrous methanol. At a temperature of 0°C, the reaction mixture is further diluted dropwise with a solution of 15.2 ml of 5.4M sodium methanolate (82.17 mmol) and treated with 10 ml of absolute methanol. The reaction mixture is then heated to ambient temperature with 35 minutes' stirring. Using thin-layer chromatography (hexane/ethyl acetate 8:2) it can be established that reaction of the starting material is complete. The reaction solution is then concentrated under reduced pressure. The residue is then extracted by means of carbon tetrachloride against water. The aqueous phase is extracted a further three times using fresh carbon tetrachloride. The combined organic extracts are dried over sodium sulfate and concentrated by evaporation under reduced pressure; with ice-cooling, the oily product that remains behind crystallises out in the form of a ~1:1 mixture. The mixture is separated by means of column chromatography on silica gel (eluant: gradient from 1-5% ethyl acetate / hexane). 3.1 g (52.9%) of pure 3-chloro-1,5-dimethyl-4-methoxy-8-oxa-bicyclo[3.2.1]octa-3,6-dien-2-one are isolated.

^1H NMR (300 MHz; $CDCl_3$) δ 6.48 (d, 1H); 6.24 (d, 1H); 4.24 (s, 3H); 1.60 (s, 3H); 1.56 (s, 3H).

A second fraction yields 3.17 g (46.9%) of pure 3-chloro-4,4-dimethoxy-1,5-dimethyl-8-oxa-bicyclo[3.2.1]oct-6-en-2-one.

^1H NMR (300 MHz; $CDCl_3$) δ 6.25 (d, 1H); 6.05 (d, 1H); 5.15 (s, 1H); 3.48 (s, 3H); 3.46 (s, 3H); 1.53 (s, 3H); 1.51 (s, 3H).

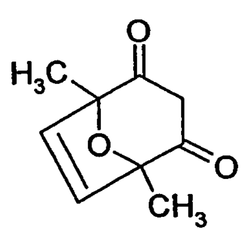
Preparation Example P4: Preparation of 4,4-dimethoxy-1,5-dimethyl-8-oxa-bicyclo[3.2.1]oct-6-en-2-one:



2.2 g (8.92 mmol) of 3-chloro-4,4-dimethoxy-1,5-dimethyl-8-oxa-bicyclo[3.2.1]oct-6-en-2-one in 240 ml of toluene are degassed, with heating at reflux temperature, and a catalytic amount of 66 mg of azaisobutyronitrile (AIBN) and a solution of 5.9 ml (22.3 mmol) of tributyltin hydride are added in succession. The reaction mixture is maintained at reflux temperature for a further 20 minutes to complete the reaction (TLC monitoring: hexane/ethyl acetate 4:1). The reaction mixture is then concentrated by evaporation under reduced pressure. The residue is then taken up in acetonitrile and the tin-containing residues are extracted by means of hexane. The acetonitrile phase is concentrated by evaporation *in vacuo*, 1.56 g (82.4% of theory) of 4,4-dimethoxy-1,5-dimethyl-8-oxa-bicyclo[3.2.1]oct-6-en-2-one remaining behind in the form of a yellow oil, which can be used for the next reaction step without further purification.

^1H NMR (300 MHz; $CDCl_3$) δ 6.22 (d, 1H); 5.90 (d, 1H); 3.41 (s, 3H); 3.25 (s, 3H); 2.92 and 2.84 (AB syst., 2H, J = 16.5 Hz); 1.55 (s, 3H); 1.45 (s, 3H).

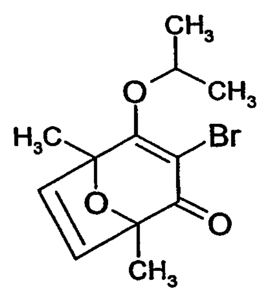
Preparation Example P5: Preparation of 1,5-dimethyl-8-oxa-bicyclo[3.2.1]oct-6-ene-2,4-dione:



1.61 g (7.59 mmol) of 4,4-dimethoxy-1,5-dimethyl-8-oxa-bicyclo[3.2.1]oct-6-en-2-one and 0.432 g (2.28 mmol) of p-toluenesulfonic acid are dissolved in a 2:1 mixture of acetone and water and heated for 50 minutes at a temperature of 70°C (TLC monitoring: hexane/ethyl acetate 9:1). The acetone is then removed under reduced pressure. The aqueous phase is then adjusted to pH 9 with saturated sodium hydrogen carbonate solution and extracted three times with ethyl acetate to remove neutral components. The aqueous phase is then adjusted to pH 5 with dilute hydrochloric acid and extracted three times with fresh ethyl acetate. The organic phase is dried over sodium sulfate and concentrated by evaporation under reduced pressure, there being obtained 1.04 g (82.5%) of technically pure 1,5-dimethyl-8-oxa-bicyclo[3.2.1]oct-6-ene-2,4-dione in the form of a yellowish product, which can be used without further purification in the next reaction step to form compounds of formula I.

^1H NMR (300 MHz; $CDCl_3$) δ 6.46 (d, 1H); 6.23 (d, 1H); 5.54 (hept., 1H); 1.58 (d, 6H); 1.40 (d, 3H); 1.25 (d, 3H).

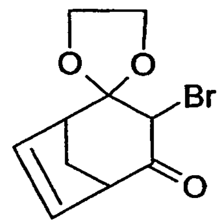
<u>Preparation Example P6: Preparation of 3-bromo-1,5-dimethyl-4-isopropoxy-8-oxa-bicyclo-[3.2.1]octa-3,6-dien-2-one</u>



A solution of 2.74 g (8.9 mmol) of 3,4-dibromo-1,5-dimethyl-8-oxa-bicyclo[3.2.1]octa-3,6-dien-2-one (prepared according to *Organic Lett.* **4**(12), 1997 (2002)) dissolved in 10 ml of tetrahydrofuran is added dropwise at ambient temperature to a solution of 5.4 ml (10.7 mmol) of 2M lithium isopropanolate diluted with 10 ml of tetrahydrofuran. The mixture is stirred for 3 hours at ambient temperature until the starting material has reacted completely (TLC monitoring: hexane/ethyl acetate/hexane 4:1). The reaction solution is then treated at a temperature of 0°C with a 10% sodium dihydrogen phosphate solution (20 ml) and water (30 ml) and extracted three times with ethyl acetate. Drying over sodium sulfate and concentration by evaporation are carried out. For further purification, the dark oil so obtained is purified by chromatography over silica gel with 5% ethyl acetate in hexane. 1.73 g (68% of theory) of pure 3-bromo-1,5-dimethyl-4-isopropoxy-8-oxa-bicyclo[3.2.1]octa-3,6-dien-2-one are isolated.

^{1}H NMR (300 MHz; $CDCl_3$) δ 6.46 (d, 1H); 6.23 (d, 1H); 5.54 (hept., 1H); 1.58 (d, 6H); 1.40 (d, 3H); 1.25 (d, 3H).

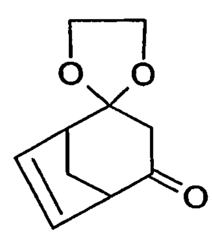
Preparation Example P7: Preparation of 3-bromo-4,4-(1',2'-ethylenedioxy)-bicyclo[3.2.1]oct-6-en-2-one:



A sodium glycolate solution is prepared by stirring 124 mg (5.4 mmol) of metallic sodium into 2.7 ml (42.42 mmol) of anhydrous ethylene glycol at ambient temperature and, when the sodium has completely dissolved, 1.5 ml of tetrahydrofuran are added. To the resulting monosodium glycolate solution there is then added dropwise a solution of 1 g (3.6 mmol) of 3,4-dibromo-bicyclo[3.2.1]octa-3,6-dien-2-one (prepared according to *Organic Lett. 4*(12), 1997 (*2002*)) dissolved in 5 ml of tetrahydrofuran. The reaction mixture is then stirred at ambient temperature for 90 minutes with TLC monitoring (mobile phase hexane/ethyl acetate 4:1). The reaction mixture is then treated with 8 ml of 10% sodium dihydrogen phosphate solution and extracted with ethyl acetate (3x). The organic phase is washed with water to remove ethylene glycol, then dried and concentrated by evaporation. 930 mg (~100%) of 3-bromo-4,4-ethylenedioxy-bicyclo[3.2.1]oct-6-en-2-one are obtained in the form of a white solid.

^{1}H NMR (300 MHz; $CDCl_3$) δ 6.38 (m, 1H); 6.25 (m, 1H); 5.46 (s, 1H); 4.25 (m, 2H); 4.04 (m, 2H); 3.38 (m, 1H); 2.98 (m, 1H); 2.40 (m, 1H); 2.25 (m, 1H).

Preparation Example P8: Preparation of 4,4-(1',2'-ethylenedioxy)-bicyclo[3.2.1]oct-6-en-2-one:

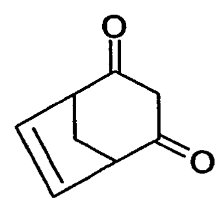


A degassed solution of 920 mg (3.55 mmol) of 3-bromo-4,4-(1',2'-ethylenedioxy)-bicyclo-[3.2.1]oct-6-en-2-one in 90 ml of toluene is treated at boiling temperature in succession with a catalytic amount (30 mg) of AIBN and with 2.35 ml (8.88 mmol) of tributyltin hydride. To

complete the reaction, the reaction mixture is maintained at reflux for a further 20 minutes, with TLC monitoring (mobile phase hexane/ethyl acetate 1:1). The reaction mixture is then concentrated by evaporation under reduced pressure. The residue is taken up in a small amount of acetonitrile and extracted five times with a small amount of hexane in order to remove tin-containing secondary products. The acetonitrile phase is then again concentrated by evaporation. 800 mg of 4,4-(1',2'-ethylenedioxy)-bicyclo[3.2.1]oct-6-en-2-one are obtained in the form of a yellow oil, which can be transferred directly to the next reaction step without further purification.

^{1}H NMR (300 MHz; $CDCl_3$) δ 6.30 (m, 1H); 6.12 (m, 1H); 4.02-3.90 (m, 2 x 2H); 3.10 (m, 1H); 3.06 (d, 1H); 2.83 (m, 1H); 2.45 (d, 1H); 2.40-2.25 (m, 2 x 1H).

Preparation Example P9: Bicyclo[3.2.1]oct-6-ene-2,4-dione:



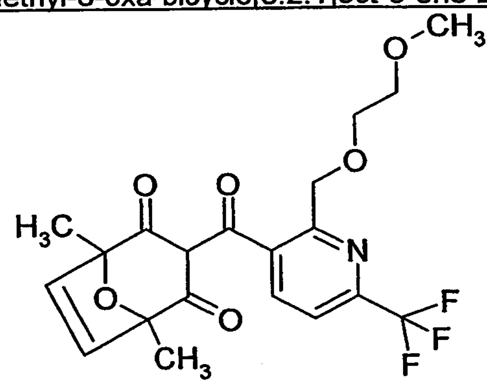
a) 640 mg (3.55 mmol) of 4,4-(1',2'-ethylenedioxy)-bicyclo[3.2.1]oct-6-en-2-one are heated for 16 hours at a temperature of 70°C in the presence of 200 mg of p-toluenesulfonic acid in a 2:1 mixture of acetone and water. After hydrolysis is complete (TLC monitoring: ethyl acetate / hexane 1:1), the acetone is distilled off under reduced pressure and the aqueous phase is adjusted to pH 9 with saturated sodium hydrogen carbonate solution. After extraction of the aqueous phase three times with ethyl acetate, it is acidified to pH 5 with dilute hydrochloric acid. Extraction is carried out three times with fresh ethyl acetate, followed by drying over sodium sulfate and concentration by evaporation *in vacuo*. 364 mg (75%) of pure bicyclo[3.2.1]oct-6-ene-2,4-dione are obtained in the form of a yellow oil for further reaction to form compounds of formula I.

^{1}H NMR (300 MHz; $CDCl_3$) δ 6.22 (m, 2H); 3.50 (d, 1H); 3.45 (m, 2H); 3.22 (d, 1H); 2.60-2.45 (m, 2 x 1H).

b) One-pot process: 100 mg (0.39 mmol) of 3-bromo-4,4-(1',2'-ethylenedioxy)-bicyclo[3.2.1]-oct-6-en-2-one are taken up in concentrated acetic acid and treated at ambient temperature with 80 mg (1.16 mmol) of zinc powder. The progress of the reaction is monitored by means of thin-layer chromatography (mobile phase: hexane/ethyl acetate 1:1). When after 2 hours brominated starting material can no longer be detected, the reaction mixture is heated cont-

inuously at a temperature of 95°C. After a further 2 hours, according to thin-layer chromatography all the reference material 4,4-(1',2'-ethylenedioxy)-bicyclo[3.2.1]oct-6-en-2-one has reacted. The reaction mixture is filtered and concentrated *in vacuo*. The residue is treated with saturated sodium hydrogen carbonate solution and extracted three times with ethyl acetate. The alkaline aqueous phase is adjusted to pH 3-4 with dilute hydrochloric acid and extracted three times with fresh ethyl acetate. After drying of the organic phase over sodium sulfate and subsequent concentration by evaporation, 45 mg (85% of theory) of technically pure bicyclo[3.2.1]oct-6-ene-2,4-dione are obtained.

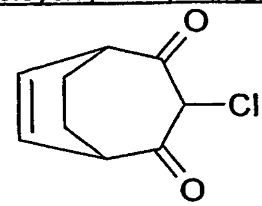
<u>Preparation Example P10: Preparation of 3-[2-(2-methoxy-ethoxymethyl)-6-trifluoromethyl-pyridine-3-carbonyl]-1,5-dimethyl-8-oxa-bicyclo[3.2.1]oct-6-ene-2,4-dione:</u>



146 mg (0.879 mmol) of 1,5-dimethyl-8-oxa-bicyclo[3.2.1]oct-6-ene-2,4-dione and 245 mg (0.879 mmol) of 2-(2-methoxy-ethoxymethyl)-6-trifluoromethyl-nicotinic acid (preparation as described in WO 01/94339) are dissolved in 29 ml of acetonitrile and treated at ambient temperature with 199 mg (0.966 mmol) of dicyclohexylcarbodiimide. The reaction mixture is stirred for 2 hours and then 0.184 ml (1.318 mmol) of triethylamine and 0.08 ml (0.879 mmol) of acetone cyanohydrin are added. Stirring is carried out for a further 16 hours at ambient temperature, followed by concentration under reduced pressure. The residue that remains behind is chromatographed over silica gel (eluant: toluene / ethanol / dioxane / triethylamine / water 20:8:4:4:1). The product-containing fraction is concentrated. The oily residue is again dissolved in fresh ethyl acetate and washed with 10 ml of dilute hydrochloric acid (pH 1), and then with water (2x) and sodium chloride solution (2x). After the solution has been dried over sodium sulfate and concentrated by evaporation under reduced pressure, 128 mg (34%) of 3-[2-(2-methoxy-ethoxymethyl)-6-trifluoromethyl-pyridine-3-carbonyl]-1,5-dimethyl-8-oxa-bicyclo[3.2.1]oct-6-ene-2,4-dione are obtained in the form of a yellow oil.

^{1}H NMR (300 MHz; $CDCl_3$) δ 16.1 (br. s, 1H); 7.68 (m, 2 x 1H); 6.29 (d, 1H); 6.22 (d, 1H); 4.72 (m, 2H); 3.48 (m, 2H); 3.37 (m, 2H); 3.32 (s, 3H); 1.68 (s, 3H); 1.48 (s, 3H).

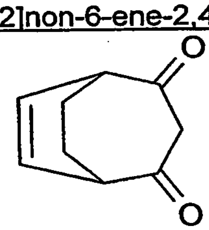
Preparation Example P11: 3-Chloro-bicyclo[3.2.2]non-6-ene-2,4-dione:



0.7 g (2.7 mmol) of 2,3,4,4-tetrachloro-bicyclo[3.2.2]nona-2,6-diene (known from US-A-3 538 117) is heated in a mixture of 1 ml of trifluoroacetic acid, 4 ml of acetic acid and 1 ml of water for 18 hours at a temperature of 70°C. The cooled reaction solution is then taken up in diethyl ether and extracted first with water and then with saturated sodium chloride solution. After chromatographic purification (ethyl acetate/hexane 1:4), 0.33 g of 3-chloro-bicyclo-[3.2.2]non-6-ene-2,4-dione is obtained as a tautomeric mixture of the forms Da and Db.

^{1}H-NMR (300 MHz; $CDCl_3$) δ 8.58 (b, 1H); 6.38 (m, 2H); 3.78 (m, 2H); 2.05 to 1.80 (m, 4H); tautomeric form Db.

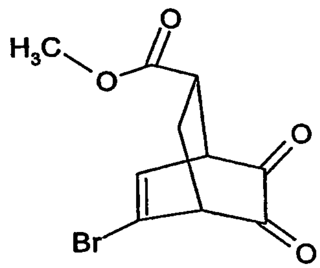
Preparation Example P12: Bicyclo[3.2.2]non-6-ene-2,4-dione:



0.19 g (1 mmol) of 3-chloro-bicyclo[3.2.2]non-6-ene-2,4-dione is treated in the presence of 4 ml of acetic acid with 0.27 g (4 mmol) of zinc and the mixture is heated for 3 hours at a temperature of 95°C. The cooled reaction mixture is then extracted with ethyl acetate against water and then washed again with saturated sodium chloride solution. 0.14 g of amorphous bicyclo[3.2.2]non-6-ene-2,4-dione is obtained as tautomeric form Da.

^{1}H-NMR (300 MHz; $CDCl_3$) δ 6.22 (m, 2H); 3.58 to 3.51 (m, 2H); 2.12 (m, 2H); 1.92 (m, 2H).

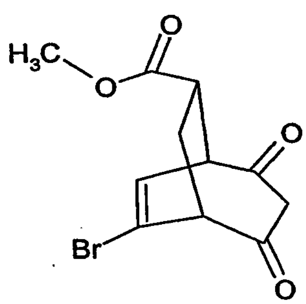
Preparation Example P13: 5-Bromo-7,8-dioxo-bicyclo[2.2.2]oct-5-ene-2-carboxylic acid methyl ester:



3 g (9.4 mmol) of 5-bromo-8,8-dimethoxy-7-oxo-bicyclo[2.2.2]oct-5-ene-2-carboxylic acid methyl ester (J.O.C. (202), 67, 6493) are stirred in a mixture of 15 ml of trifluoroacetic acid and 1 ml of water for 12 hours at room temperature. Extraction is then carried out with dichloromethane against water. The organic phase is dried over sodium sulfate and yields, after removal of the solvent, the 5-bromo-7,8-dioxo-bicyclo[2.2.2]oct-5-ene-2-carboxylic acid methyl ester in the form of an orange-coloured oil and as a pure isomer.

^{1}H-NMR (300 MHz; $CDCl_3$) δ 6.62 (d, 1H); 3.97 (d, 1H); 3.80 (s, 3H); 3.70 (m, 1H); 3.20 (d, 1H); 2.63 (m, 1H); 2.40 (m, 1H).

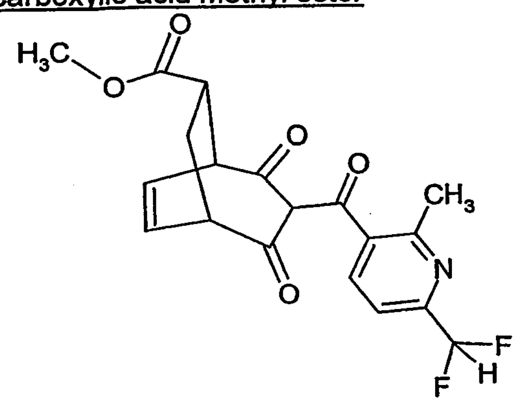
Preparation Example P14: 8-Bromo-2,4-dioxo-bicyclo[3.2.2]non-8-ene-6-carboxylic acid methyl ester



4.2 ml of trimethylsilyl-diazomethane are added dropwise at a temperature of –10°C to a solution of 1.91 g (7 mmol) of 5-bromo-7,8-dioxo-bicyclo[2.2.2]oct-5-ene-2-carboxylic acid methyl ester in 20 ml of dichloromethane and 0.089 ml (0.7 mmol) of boron trifluoride etherate. The cooling is removed and the reaction mixture is stirred for 4 hours at a temperature of 20°C. The reaction solution is then extracted with water, the organic phase is dried over sodium sulfate and concentrated by evaporation using a rotary evaporator, and the residue is purified by silica gel chromatography. An isomer of 8-bromo-2,4-dioxo-bicyclo[3.2.2]non-8-ene-6-carboxylic acid methyl ester is obtained.

^{1}H-NMR (300 MHz; $CDCl_3$) δ 6.42 (d, 1H); 3.86 (d, 1H); 3.75 (d, 1H); 3.68 (s, 3H); 3.65 (m, 1H); 3.43 (d, 1H); 3.10 (m, 1H); 2.52 (m, 1H); 2.34 (m, 1H); tautomeric form Da.

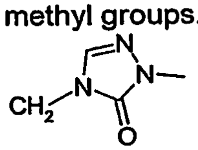
Preparation Example P15: 3-(2-Methyl-6-difluoromethyl-pyridine-3-carbonyl)-2,4-dioxo-bicyclo[3.2.2]non-8-ene-6-carboxylic acid methyl ester



Catalytic amounts (10 mg) of azaisobutyronitrile are added to a solution of 0.10 g (0.24 mmol) of 8-bromo-3-(2-methyl-6-difluoromethyl-pyridine-3-carbonyl)-2,4-dioxo-bicyclo-[3.2.2]non-8-ene-6-carboxylic acid methyl ester (Example 1.1155) and 0.149 ml (0.48 mmol) of tris(trimethylsilyl)silane in 3.5 ml of toluene and the reaction mixture is stirred at a temperature of 80°C. 5 mg portions of fresh azaisobutyronitrile dissolved in a small amount of toluene are then added four times until, after 6 days, the reaction has come to a complete standstill (LC-MS monitoring). The solvent is then removed under reduced pressure and the residue is purified by silica gel chromatography (eluant: gradient mixture of ethyl acetate / tetrahydrofuran / hexane and 3% triethylamine). After removal of the solvents the triethylammonium salt of 3-(2-methyl-6-difluoromethyl-pyridine-3-carbonyl)-2,4-dioxo-bicyclo-[3.2.2]non-8-ene-6-carboxylic acid methyl ester is obtained.

^{1}H-NMR (300 MHz; $CDCl_3$) δ 7.30 (m, 2H); 6.51 (t, 1H); 6.35 (m, 1H); 6.18 (m, 1H); 3.68 (m, 1H); 3.52 (s, 3H); 3.35 (m, 1H); 3.24 (m, 1H); 3.00 (q, 6H); 2.40 (s, 3H); 2.38 (m, 1H); 2.14 (m, 1H); 1.18 (t, 9H).

The following Tables 1 to 3 list preferred compounds of formula I. The linkage site of the substituent Z_1 to the pyridine ring is the unsaturated valency; the free bonds represent methyl groups. For example, in the group



(IAd_1)

the $-CH_2$ group at the nitrogen atom adjacent to the keto group is the linkage site; the free bond at the nitrogen atom represents methyl. That group can also be depicted as follows:

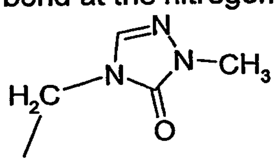
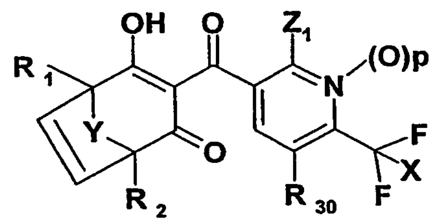


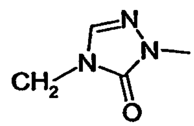
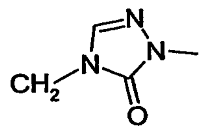
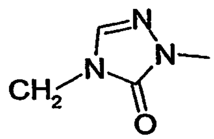
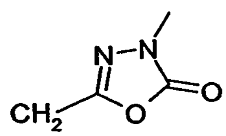
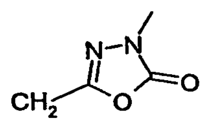
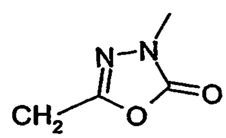
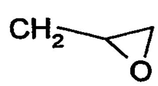
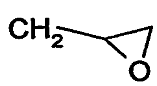
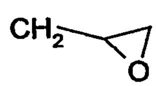
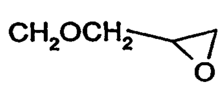
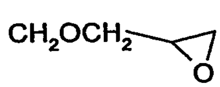
Table 1: Compounds of formula Ib:

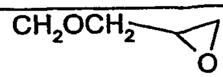
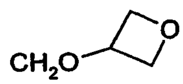
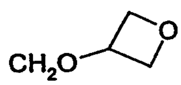
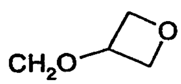
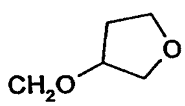
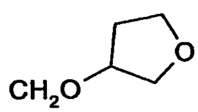
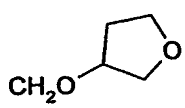


(Ib)

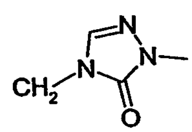
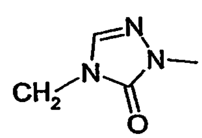
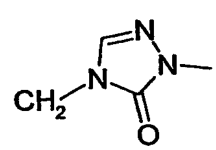
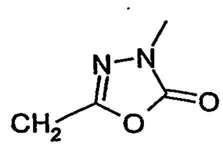
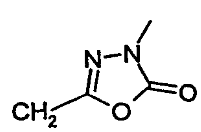
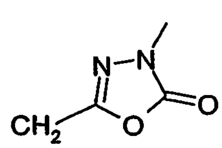
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0000	H	H	CH_3	H	F	NSO_2CH_3	0	
1.0001	H	H	CH_3	H	Cl	NSO_2CH_3	0	
1.0002	H	H	CH_3	H	H	NSO_2CH_3	0	
1.0003	H	H	CH_3	CH_3	F	NSO_2CH_3	0	
1.0004	H	H	CH_3	CH_3	Cl	NSO_2CH_3	0	
1.0005	H	H	CH_3	CH_3	H	NSO_2CH_3	0	
1.0006	H	H	CH_2CH_3	H	F	NSO_2CH_3	0	
1.0007	H	H	CH_2CH_3	H	Cl	NSO_2CH_3	0	
1.0008	H	H	CH_2CH_3	H	H	NSO_2CH_3	0	
1.0009	H	H	$CH_2CH_2CH_3$	H	F	NSO_2CH_3	0	
1.0010	H	H	$CH_2CH_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0011	H	H	$CH_2CH_2CH_3$	H	H	NSO_2CH_3	0	
1.0012	H	H	CH_2OCH_3	H	F	NSO_2CH_3	0	
1.0013	H	H	CH_2OCH_3	H	Cl	NSO_2CH_3	0	
1.0014	H	H	CH_2OCH_3	H	H	NSO_2CH_3	0	
1.0015	H	H	$CH_2OCH_2CH_3$	H	F	NSO_2CH_3	0	
1.0016	H	H	$CH_2OCH_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0017	H	H	$CH_2OCH_2CH_3$	H	H	NSO_2CH_3	0	

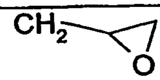
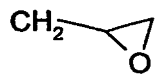
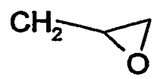
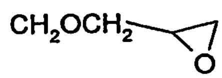
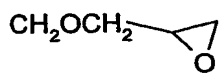
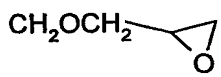
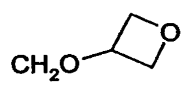
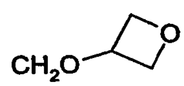
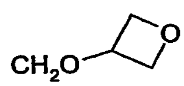
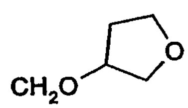
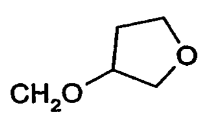
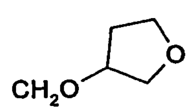
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0018	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0019	H	H	$CH_2OCH_2CH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0020	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0021	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	NSO_2CH_3	0	
1.0022	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0023	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	NSO_2CH_3	0	
1.0024	H	H	$CH_2CH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0025	H	H	$CH_2CH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0026	H	H	$CH_2CH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0027	H	H	$CH_2OCH_2C{\equiv}CH$	H	F	NSO_2CH_3	0	
1.0028	H	H	$CH_2OCH_2C{\equiv}CH$	H	Cl	NSO_2CH_3	0	
1.0029	H	H	$CH_2OCH_2C{\equiv}CH$	H	H	NSO_2CH_3	0	
1.0030	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	F	NSO_2CH_3	0	
1.0031	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	NSO_2CH_3	0	
1.0032	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	H	NSO_2CH_3	0	
1.0033	H	H	$CH_2CH_2CH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0034	H	H	$CH_2CH_2CH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0035	H	H	$CH_2CH_2CH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0036	H	H	$CH_2OCH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0037	H	H	$CH_2OCH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0038	H	H	$CH_2OCH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0039	H	H	$CH_2N(CH_3)SO_2CH_3$	H	F	NSO_2CH_3	0	
1.0040	H	H	$CH_2N(CH_3)SO_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0041	H	H	$CH_2N(CH_3)SO_2CH_3$	H	H	NSO_2CH_3	0	
1.0042	H	H	CF_3	H	F	NSO_2CH_3	0	
1.0043	H	H	CF_3	H	Cl	NSO_2CH_3	0	
1.0044	H	H	CF_3	H	H	NSO_2CH_3	0	
1.0045	H	H	$CH_2OCH_2CF_3$	H	F	NSO_2CH_3	0	
1.0046	H	H	$CH_2OCH_2CF_3$	H	Cl	NSO_2CH_3	0	
1.0047	H	H	$CH_2OCH_2CF_3$	H	H	NSO_2CH_3	0	
1.0048	H	H	CH_2OCH_2Ph	H	F	NSO_2CH_3	0	
1.0049	H	H	CH_2OCH_2Ph	H	Cl	NSO_2CH_3	0	
1.0050	H	H	CH_2OCH_2Ph	H	H	NSO_2CH_3	0	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0051	H	H	$CH_2OCH_2CH{=}CH_2$	H	F	NSO_2CH_3	0	
1.0052	H	H	$CH_2OCH_2CH{=}CH_2$	H	Cl	NSO_2CH_3	0	
1.0053	H	H	$CH_2OCH_2CH{=}CH_2$	H	H	NSO_2CH_3	0	
1.0054	H	H		H	F	NSO_2CH_3	0	
1.0055	H	H		H	Cl	NSO_2CH_3	0	
1.0056	H	H		H	H	NSO_2CH_3	0	
1.0057	H	H		H	F	NSO_2CH_3	0	
1.0058	H	H		H	Cl	NSO_2CH_3	0	
1.0059	H	H		H	H	NSO_2CH_3	0	
1.0060	H	H		H	F	NSO_2CH_3	0	
1.0061	H	H		H	Cl	NSO_2CH_3	0	
1.0062	H	H		H	H	NSO_2CH_3	0	
1.0063	H	H		H	F	NSO_2CH_3	0	
1.0064	H	H		H	Cl	NSO_2CH_3	0	

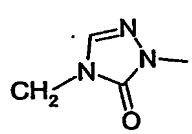
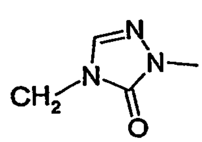
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0065	H	H		H	H	NSO_2CH_3	0	
1.0066	H	H		H	F	NSO_2CH_3	0	
1.0067	H	H		H	Cl	NSO_2CH_3	0	
1.0068	H	H		H	H	NSO_2CH_3	0	
1.0069	H	H		H	F	NSO_2CH_3	0	
1.0070	H	H		H	Cl	NSO_2CH_3	0	
1.0071	H	H		H	H	NSO_2CH_3	0	
1.0072	H	H	CH_3	H	F	NSO_2CH_3	1	
1.0073	H	H	CH_2OCH_3	H	F	NSO_2CH_3	1	
1.0074	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	NSO_2CH_3	1	
1.0075	H	H	$CH_2CH_2CH_2OCH_3$	H	F	NSO_2CH_3	1	
1.0076	H	H	CH_2CH_3	H	F	NSO_2CH_3	1	
1.0077	H	H	CH_3	H	H	NSO_2CH_3	1	
1.0078	H	H	CH_2OCH_3	H	H	NSO_2CH_3	1	
1.0079	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	NSO_2CH_3	1	
1.0080	H	H	$CH_2CH_2CH_2OCH_3$	H	H	NSO_2CH_3	1	
1.0081	H	H	CH_2CH_3	H	H	NSO_2CH_3	1	
1.0082	CH_3	CH_3	CH_3	H	F	NSO_2CH_3	0	
1.0083	CH_3	CH_3	CH_3	H	Cl	NSO_2CH_3	0	
1.0084	CH_3	CH_3	CH_3	H	H	NSO_2CH_3	0	
1.0085	CH_3	CH_3	CH_3	CH_3	F	NSO_2CH_3	0	
1.0086	CH_3	CH_3	CH_3	CH_3	Cl	NSO_2CH_3	0	
1.0087	CH_3	CH_3	CH_3	CH_3	H	NSO_2CH_3	0	
1.0088	CH_3	CH_3	CH_2CH_3	H	F	NSO_2CH_3	0	

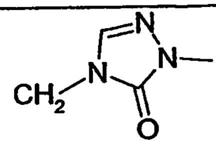
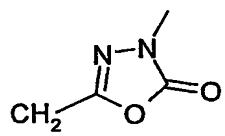
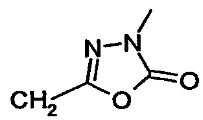
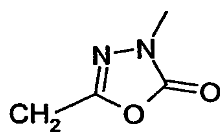
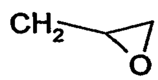
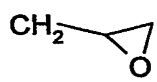
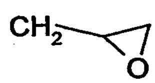
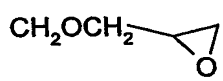
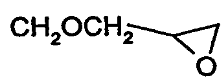
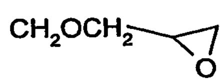
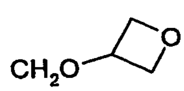
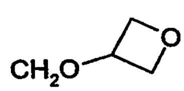
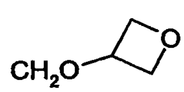
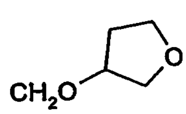
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0089	CH_3	CH_3	CH_2CH_3	H	Cl	NSO_2CH_3	0	
1.0090	CH_3	CH_3	CH_2CH_3	H	H	NSO_2CH_3	0	
1.0091	CH_3	CH_3	$CH_2CH_2CH_3$	H	F	NSO_2CH_3	0	
1.0092	CH_3	CH_3	$CH_2CH_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0093	CH_3	CH_3	$CH_2CH_2CH_3$	H	H	NSO_2CH_3	0	
1.0094	CH_3	CH_3	CH_2OCH_3	H	F	NSO_2CH_3	0	
1.0095	CH_3	CH_3	CH_2OCH_3	H	Cl	NSO_2CH_3	0	
1.0096	CH_3	CH_3	CH_2OCH_3	H	H	NSO_2CH_3	0	
1.0097	CH_3	CH_3	$CH_2OCH_2CH_3$	H	F	NSO_2CH_3	0	
1.0098	CH_3	CH_3	$CH_2OCH_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0099	CH_3	CH_3	$CH_2OCH_2CH_3$	H	H	NSO_2CH_3	0	
1.0100	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0101	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0102	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0103	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	NSO_2CH_3	0	
1.0104	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0105	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	NSO_2CH_3	0	
1.0106	CH_3	CH_3	$CH_2CH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0107	CH_3	CH_3	$CH_2CH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0108	CH_3	CH_3	$CH_2CH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0109	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	NSO_2CH_3	0	
1.0110	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	NSO_2CH_3	0	
1.0111	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	NSO_2CH_3	0	
1.0112	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	NSO_2CH_3	0	
1.0113	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	NSO_2CH_3	0	
1.0114	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	NSO_2CH_3	0	
1.0115	CH_3	CH_3	$CH_2CH_2CH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0116	CH_3	CH_3	$CH_2CH_2CH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0117	CH_3	CH_3	$CH_2CH_2CH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0118	CH_3	CH_3	$CH_2OCH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0119	CH_3	CH_3	$CH_2OCH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0120	CH_3	CH_3	$CH_2OCH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0121	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	NSO_2CH_3	0	

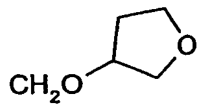
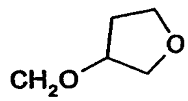
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0122	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0123	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	NSO_2CH_3	0	
1.0124	CH_3	CH_3	CF_3	H	F	NSO_2CH_3	0	
1.0125	CH_3	CH_3	CF_3	H	Cl	NSO_2CH_3	0	
1.0126	CH_3	CH_3	CF_3	H	H	NSO_2CH_3	0	
1.0127	CH_3	CH_3	$CH_2OCH_2CF_3$	H	F	NSO_2CH_3	0	
1.0128	CH_3	CH_3	$CH_2OCH_2CF_3$	H	Cl	NSO_2CH_3	0	
1.0129	CH_3	CH_3	$CH_2OCH_2CF_3$	H	H	NSO_2CH_3	0	
1.0130	CH_3	CH_3	CH_2OCH_2Ph	H	F	NSO_2CH_3	0	
1.0131	CH_3	CH_3	CH_2OCH_2Ph	H	Cl	NSO_2CH_3	0	
1.0132	CH_3	CH_3	CH_2OCH_2Ph	H	H	NSO_2CH_3	0	
1.0133	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	NSO_2CH_3	0	
1.0134	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	NSO_2CH_3	0	
1.0135	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	NSO_2CH_3	0	
1.0136	CH_3	CH_3		H	F	NSO_2CH_3	0	
1.0137	CH_3	CH_3		H	Cl	NSO_2CH_3	0	
1.0138	CH_3	CH_3		H	H	NSO_2CH_3	0	
1.0139	CH_3	CH_3		H	F	NSO_2CH_3	0	
1.0140	CH_3	CH_3		H	Cl	NSO_2CH_3	0	
1.0141	CH_3	CH_3		H	H	NSO_2CH_3	0	

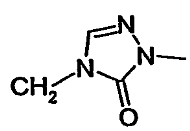
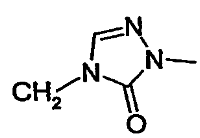
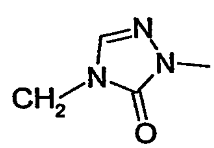
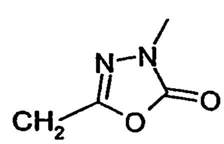
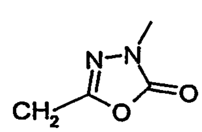
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0142	CH_3	CH_3		H	F	NSO_2CH_3	0	
1.0143	CH_3	CH_3		H	Cl	NSO_2CH_3	0	
1.0144	CH_3	CH_3		H	H	NSO_2CH_3	0	
1.0145	CH_3	CH_3		H	F	NSO_2CH_3	0	
1.0146	CH_3	CH_3		H	Cl	NSO_2CH_3	0	
1.0147	CH_3	CH_3		H	H	NSO_2CH_3	0	
1.0148	CH_3	CH_3		H	F	NSO_2CH_3	0	
1.0149	CH_3	CH_3		H	Cl	NSO_2CH_3	0	
1.0150	CH_3	CH_3		H	H	NSO_2CH_3	0	
1.0151	CH_3	CH_3		H	F	NSO_2CH_3	0	
1.0152	CH_3	CH_3		H	Cl	NSO_2CH_3	0	
1.0153	CH_3	CH_3		H	H	NSO_2CH_3	0	
1.0154	CH_3	CH_3	CH_3	H	F	NSO_2CH_3	1	
1.0155	CH_3	CH_3	CH_2OCH_3	H	F	NSO_2CH_3	1	
1.0156	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	NSO_2CH_3	1	
1.0157	CH_3	CH_3	$CH_2CH_2CH_2OCH_3$	H	F	NSO_2CH_3	1	
1.0158	CH_3	CH_3	CH_2CH_3	H	F	NSO_2CH_3	1	
1.0159	CH_3	CH_3	CH_3	H	H	NSO_2CH_3	1	
1.0160	CH_3	CH_3	CH_2OCH_3	H	H	NSO_2CH_3	1	

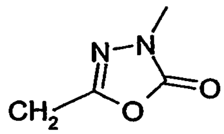
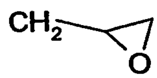
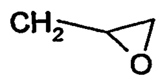
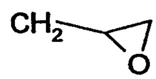
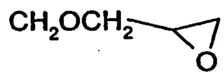
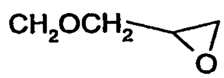
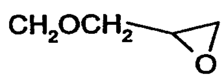
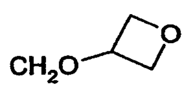
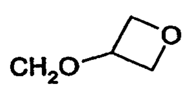
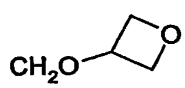
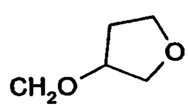
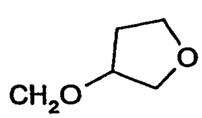
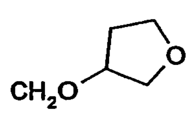
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0161	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	NSO_2CH_3	1	
1.0162	CH_3	CH_3	$CH_2CH_2CH_2OCH_3$	H	H	NSO_2CH_3	1	
1.0163	CH_3	CH_3	CH_2CH_3	H	H	NSO_2CH_3	1	
1.0164	H	CH_3	CH_3	H	F	NSO_2CH_3	0	
1.0165	H	CH_3	CH_3	H	Cl	NSO_2CH_3	0	
1.0166	H	CH_3	CH_3	H	H	NSO_2CH_3	0	
1.0167	H	CH_3	CH_3	CH_3	F	NSO_2CH_3	0	
1.0168	H	CH_3	CH_3	CH_3	Cl	NSO_2CH_3	0	
1.0169	H	CH_3	CH_3	CH_3	H	NSO_2CH_3	0	
1.0170	H	CH_3	CH_2CH_3	H	F	NSO_2CH_3	0	
1.0171	H	CH_3	CH_2CH_3	H	Cl	NSO_2CH_3	0	
1.0172	H	CH_3	CH_2CH_3	H	H	NSO_2CH_3	0	
1.0173	H	CH_3	$CH_2CH_2CH_3$	H	F	NSO_2CH_3	0	
1.0174	H	CH_3	$CH_2CH_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0175	H	CH_3	$CH_2CH_2CH_3$	H	H	NSO_2CH_3	0	
1.0176	H	CH_3	CH_2OCH_3	H	F	NSO_2CH_3	0	
1.0177	H	CH_3	CH_2OCH_3	H	Cl	NSO_2CH_3	0	
1.0178	H	CH_3	CH_2OCH_3	H	H	NSO_2CH_3	0	
1.0179	H	CH_3	$CH_2OCH_2CH_3$	H	F	NSO_2CH_3	0	
1.0180	H	CH_3	$CH_2OCH_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0181	H	CH_3	$CH_2OCH_2CH_3$	H	H	NSO_2CH_3	0	
1.0182	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0183	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0184	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0185	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	NSO_2CH_3	0	
1.0186	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0187	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	NSO_2CH_3	0	
1.0188	H	CH_3	$CH_2CH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0189	H	CH_3	$CH_2CH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0190	H	CH_3	$CH_2CH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0191	H	CH_3	$CH_2OCH_2C\equiv CH$	H	F	NSO_2CH_3	0	
1.0192	H	CH_3	$CH_2OCH_2C\equiv CH$	H	Cl	NSO_2CH_3	0	
1.0193	H	CH_3	$CH_2OCH_2C\equiv CH$	H	H	NSO_2CH_3	0	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0194	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	NSO_2CH_3	0	
1.0195	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	NSO_2CH_3	0	
1.0196	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	NSO_2CH_3	0	
1.0197	H	CH_3	$CH_2CH_2CH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0198	H	CH_3	$CH_2CH_2CH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0199	H	CH_3	$CH_2CH_2CH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0200	H	CH_3	$CH_2OCH_2OCH_3$	H	F	NSO_2CH_3	0	
1.0201	H	CH_3	$CH_2OCH_2OCH_3$	H	Cl	NSO_2CH_3	0	
1.0202	H	CH_3	$CH_2OCH_2OCH_3$	H	H	NSO_2CH_3	0	
1.0203	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	NSO_2CH_3	0	
1.0204	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	NSO_2CH_3	0	
1.0205	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	NSO_2CH_3	0	
1.0206	H	CH_3	CF_3	H	F	NSO_2CH_3	0	
1.0207	H	CH_3	CF_3	H	Cl	NSO_2CH_3	0	
1.0208	H	CH_3	CF_3	H	H	NSO_2CH_3	0	
1.0209	H	CH_3	$CH_2OCH_2CF_3$	H	F	NSO_2CH_3	0	
1.0210	H	CH_3	$CH_2OCH_2CF_3$	H	Cl	NSO_2CH_3	0	
1.0211	H	CH_3	$CH_2OCH_2CF_3$	H	H	NSO_2CH_3	0	
1.0212	H	CH_3	CH_2OCH_2Ph	H	F	NSO_2CH_3	0	
1.0213	H	CH_3	CH_2OCH_2Ph	H	Cl	NSO_2CH_3	0	
1.0214	H	CH_3	CH_2OCH_2Ph	H	H	NSO_2CH_3	0	
1.0215	H	CH_3	$CH_2OCH_2CH=CH_2$	H	F	NSO_2CH_3	0	
1.0216	H	CH_3	$CH_2OCH_2CH=CH_2$	H	Cl	NSO_2CH_3	0	
1.0217	H	CH_3	$CH_2OCH_2CH=CH_2$	H	H	NSO_2CH_3	0	
1.0218	H	CH_3		H	F	NSO_2CH_3	0	
1.0219	H	CH_3		H	Cl	NSO_2CH_3	0	

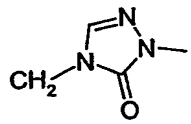
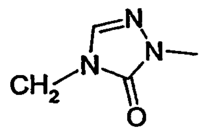
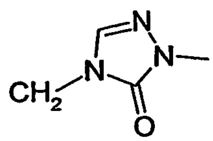
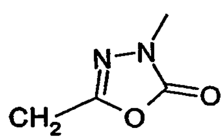
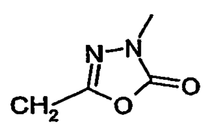
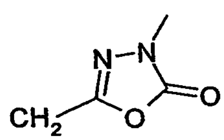
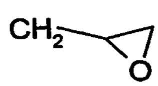
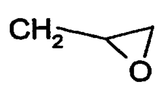
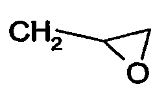
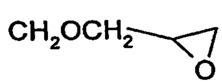
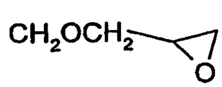
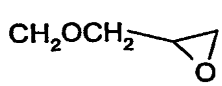
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0220	H	CH_3		H	H	NSO_2CH_3	0	
1.0221	H	CH_3		H	F	NSO_2CH_3	0	
1.0222	H	CH_3		H	Cl	NSO_2CH_3	0	
1.0223	H	CH_3		H	H	NSO_2CH_3	0	
1.0224	H	CH_3		H	F	NSO_2CH_3	0	
1.0225	H	CH_3		H	Cl	NSO_2CH_3	0	
1.0226	H	CH_3		H	H	NSO_2CH_3	0	
1.0227	H	CH_3		H	F	NSO_2CH_3	0	
1.0228	H	CH_3		H	Cl	NSO_2CH_3	0	
1.0229	H	CH_3		H	H	NSO_2CH_3	0	
1.0230	H	CH_3		H	F	NSO_2CH_3	0	
1.0231	H	CH_3		H	Cl	NSO_2CH_3	0	
1.0232	H	CH_3		H	H	NSO_2CH_3	0	
1.0233	H	CH_3		H	F	NSO_2CH_3	0	

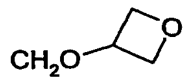
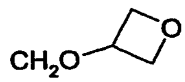
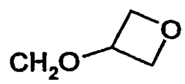
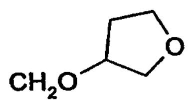
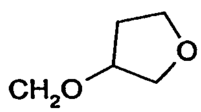
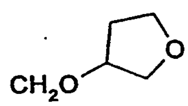
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0234	H	CH_3		H	Cl	NSO_2CH_3	0	
1.0235	H	CH_3		H	H	NSO_2CH_3	0	
1.0236	H	CH_3	CH_3	H	F	NSO_2CH_3	1	
1.0237	H	CH_3	CH_2OCH_3	H	F	NSO_2CH_3	1	
1.0238	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	NSO_2CH_3	1	
1.0239	H	CH_3	$CH_2CH_2CH_2OCH_3$	H	F	NSO_2CH_3	1	
1.0240	H	CH_3	CH_2CH_3	H	F	NSO_2CH_3	1	
1.0241	H	CH_3	CH_3	H	H	NSO_2CH_3	1	
1.0242	H	CH_3	CH_2OCH_3	H	H	NSO_2CH_3	1	
1.0243	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	NSO_2CH_3	1	
1.0244	H	CH_3	$CH_2CH_2CH_2OCH_3$	H	H	NSO_2CH_3	1	
1.0245	H	CH_3	CH_2CH_3	H	H	NSO_2CH_3	1	
1.0246	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	O	0	
1.0247	H	H	$CH_2OCH_2CH_2OCH_3$	H	Cl	O	0	
1.0248	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	O	0	
1.0249	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	O	0	
1.0250	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	O	0	
1.0251	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	O	0	
1.0252	H	H	$CH_2N(CH_3)SO_2CH_3$	H	F	O	0	
1.0253	H	H	$CH_2N(CH_3)SO_2CH_3$	H	Cl	O	0	
1.0254	H	H	$CH_2N(CH_3)SO_2CH_3$	H	H	O	0	
1.0255	H	H	CH_2OCH_2Ph	H	F	O	0	
1.0256	H	H	CH_2OCH_2Ph	H	Cl	O	0	
1.0257	H	H	CH_2OCH_2Ph	H	H	O	0	
1.0258	H	H	$CH_2OCH_2CH_2OH$	H	F	O	0	
1.0259	H	H	$CH_2OCH_2CH_2OH$	H	Cl	O	0	
1.0260	H	H	$CH_2OCH_2CH_2OH$	H	H	O	0	
1.0261	H	H	$CH_2OCH_2CH_2Cl$	H	F	O	0	
1.0262	H	H	$CH_2OCH_2CH_2Cl$	H	Cl	O	0	

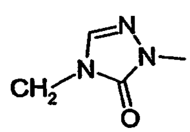
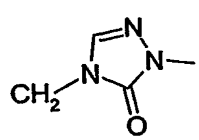
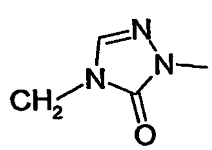
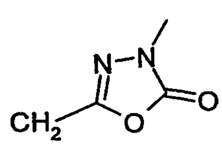
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0263	H	H	$CH_2OCH_2CH_2Cl$	H	H	O	0	
1.0264	H	H	$CH_2OCH_2CF_3$	H	F	O	0	
1.0265	H	H	$CH_2OCH_2CF_3$	H	Cl	O	0	
1.0266	H	H	$CH_2OCH_2CF_3$	H	H	O	0	
1.0267	H	H	$CH_2OCH_2CH{=}CH_2$	H	F	O	0	
1.0268	H	H	$CH_2OCH_2CH{=}CH_2$	H	Cl	O	0	
1.0269	H	H	$CH_2OCH_2CH{=}CH_2$	H	H	O	0	
1.0270	H	H	$CH_2O(CO)CH_3$	H	F	O	0	
1.0271	H	H	$CH_2O(CO)CH_3$	H	Cl	O	0	
1.0272	H	H	$CH_2O(CO)CH_3$	H	H	O	0	
1.0273	H	H	$CH_2OCH_2C{\equiv}CH$	H	F	O	0	
1.0274	H	H	$CH_2OCH_2C{\equiv}CH$	H	Cl	O	0	
1.0275	H	H	$CH_2OCH_2C{\equiv}CH$	H	H	O	0	
1.0276	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	F	O	0	
1.0277	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	O	0	
1.0278	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	H	O	0	
1.0279	H	H		H	F	O	0	
1.0280	H	H		H	Cl	O	0	
1.0281	H	H		H	H	O	0	
1.0282	H	H		H	F	O	0	
1.0283	H	H		H	Cl	O	0	

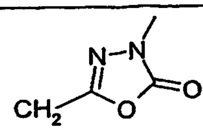
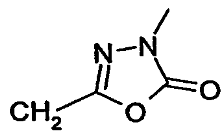
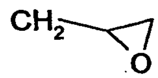
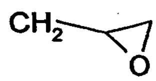
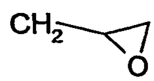
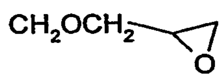
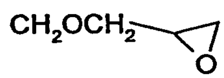
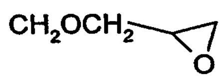
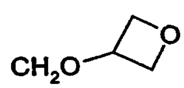
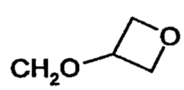
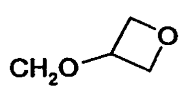
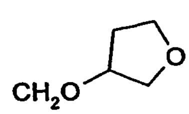
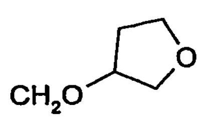
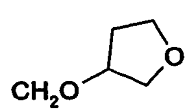
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0284	H	H		H	H	O	0	
1.0285	H	H		H	F	O	0	
1.0286	H	H		H	Cl	O	0	
1.0287	H	H		H	H	O	0	
1.0288	H	H		H	F	O	0	
1.0289	H	H		H	Cl	O	0	
1.0290	H	H		H	H	O	0	
1.0291	H	H		H	F	O	0	
1.0292	H	H		H	Cl	O	0	
1.0293	H	H		H	H	O	0	
1.0294	H	H		H	F	O	0	
1.0295	H	H		H	Cl	O	0	
1.0296	H	H		H	H	O	0	
1.0297	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	O	1	
1.0298	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	O	1	
1.0299	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	O	1	
1.0300	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	O	1	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0301	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	O	0	see Example P10
1.0302	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	O	0	
1.0303	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	O	0	
1.0304	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	O	0	
1.0305	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	O	0	
1.0306	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	O	0	
1.0307	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	O	0	
1.0308	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	O	0	
1.0309	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	O	0	
1.0310	CH_3	CH_3	CH_2OCH_2Ph	H	F	O	0	
1.0311	CH_3	CH_3	CH_2OCH_2Ph	H	Cl	O	0	
1.0312	CH_3	CH_3	CH_2OCH_2Ph	H	H	O	0	
1.0313	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	F	O	0	
1.0314	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	O	0	
1.0315	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	H	O	0	
1.0316	CH_3	CH_3	$CH_2OCH_2CH_2Cl$	H	F	O	0	
1.0317	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	Cl	O	0	
1.0318	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	H	O	0	
1.0319	CH_3	CH_3	$CH_2OCH_2CF_3$	H	F	O	0	
1.0320	CH_3	CH_3	$CH_2OCH_2CF_3$	H	Cl	O	0	
1.0321	CH_3	CH_3	$CH_2OCH_2CF_3$	H	H	O	0	
1.0322	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	O	0	
1.0323	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	O	0	
1.0324	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	O	0	
1.0325	CH_3	CH_3	$CH_2O(CO)CH_3$	H	F	O	0	
1.0326	CH_3	CH_3	$CH_2O(CO)CH_3$	H	Cl	O	0	
1.0327	CH_3	CH_3	$CH_2O(CO)CH_3$	H	H	O	0	
1.0328	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	O	0	
1.0329	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	O	0	
1.0330	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	O	0	
1.0331	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	O	0	
1.0332	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	O	0	

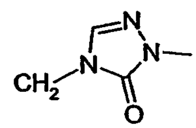
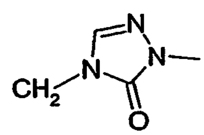
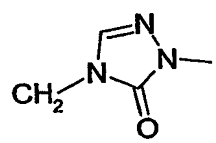
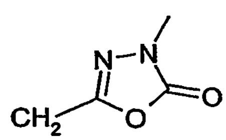
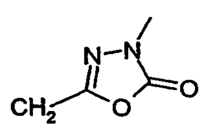
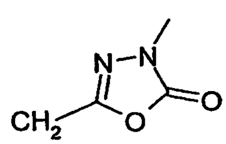
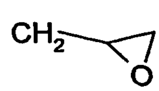
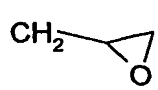
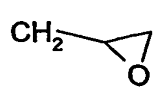
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0333	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	O	0	
1.0334	CH_3	CH_3		H	F	O	0	
1.0335	CH_3	CH_3		H	Cl	O	0	
1.0336	CH_3	CH_3		H	H	O	0	
1.0337	CH_3	CH_3		H	F	O	0	
1.0338	CH_3	CH_3		H	Cl	O	0	
1.0339	CH_3	CH_3		H	H	O	0	
1.0340	CH_3	CH_3		H	F	O	0	
1.0341	CH_3	CH_3		H	Cl	O	0	
1.0342	CH_3	CH_3		H	H	O	0	
1.0343	CH_3	CH_3		H	F	O	0	
1.0344	CH_3	CH_3		H	Cl	O	0	
1.0345	CH_3	CH_3		H	H	O	0	

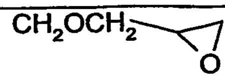
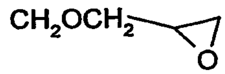
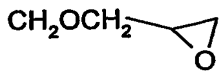
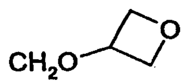
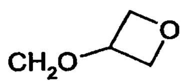
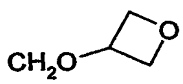
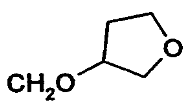
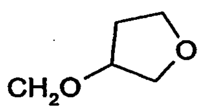
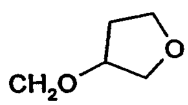
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0346	CH_3	CH_3		H	F	O	0	
1.0347	CH_3	CH_3		H	Cl	O	0	
1.0348	CH_3	CH_3		H	H	O	0	
1.0349	CH_3	CH_3		H	F	O	0	
1.0350	CH_3	CH_3		H	Cl	O	0	
1.0351	CH_3	CH_3		H	H	O	0	
1.0352	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	O	1	
1.0353	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	O	1	
1.0354	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	O	1	
1.0355	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	O	1	
1.0356	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	O	0	
1.0357	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	O	0	
1.0358	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	O	0	
1.0359	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	O	0	
1.0360	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	O	0	
1.0361	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	O	0	
1.0362	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	O	0	
1.0363	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	O	0	
1.0364	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	O	0	
1.0365	H	CH_3	CH_2OCH_2Ph	H	F	O	0	
1.0366	H	CH_3	CH_2OCH_2Ph	H	Cl	O	0	
1.0367	H	CH_3	CH_2OCH_2Ph	H	H	O	0	
1.0368	H	CH_3	$CH_2OCH_2CH_2OH$	H	F	O	0	
1.0369	H	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	O	0	
1.0370	H	CH_3	$CH_2OCH_2CH_2OH$	H	H	O	0	

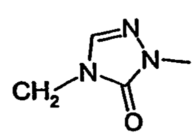
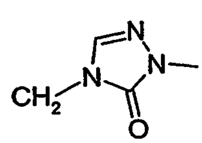
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0371	H	CH_3	$CH_2OCH_2CH_2Cl$	H	F	O	0	
1.0372	H	CH_3	$CH_2OCH_2CH_2Cl$	H	Cl	O	0	
1.0373	H	CH_3	$CH_2OCH_2CH_2Cl$	H	H	O	0	
1.0374	H	CH_3	$CH_2OCH_2CF_3$	H	F	O	0	
1.0375	H	CH_3	$CH_2OCH_2CF_3$	H	Cl	O	0	
1.0376	H	CH_3	$CH_2OCH_2CF_3$	H	H	O	0	
1.0377	H	CH_3	$CH_2OCH_2CH=CH_2$	H	F	O	0	
1.0378	H	CH_3	$CH_2OCH_2CH=CH_2$	H	Cl	O	0	
1.0379	H	CH_3	$CH_2OCH_2CH=CH_2$	H	H	O	0	
1.0380	H	CH_3	$CH_2O(CO)CH_3$	H	F	O	0	
1.0381	H	CH_3	$CH_2O(CO)CH_3$	H	Cl	O	0	
1.0382	H	CH_3	$CH_2O(CO)CH_3$	H	H	O	0	
1.0383	H	CH_3	$CH_2OCH_2C\equiv CH$	H	F	O	0	
1.0384	H	CH_3	$CH_2OCH_2C\equiv CH$	H	Cl	O	0	
1.0385	H	CH_3	$CH_2OCH_2C\equiv CH$	H	H	O	0	
1.0386	H	CH_3	$CH_2OCH_2C\equiv CCH_3$	H	F	O	0	
1.0387	H	CH_3	$CH_2OCH_2C\equiv CCH_3$	H	Cl	O	0	
1.0388	H	CH_3	$CH_2OCH_2C\equiv CCH_3$	H	H	O	0	
1.0389	H	CH_3		H	F	O	0	
1.0390	H	CH_3		H	Cl	O	0	
1.0391	H	CH_3		H	H	O	0	
1.0392	H	CH_3		H	F	O	0	

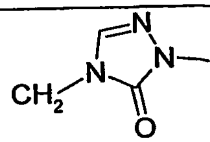
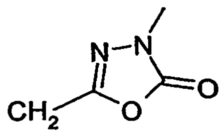
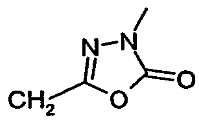
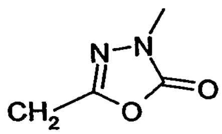
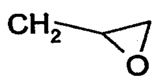
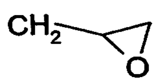
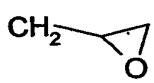
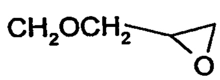
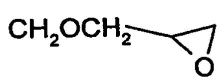
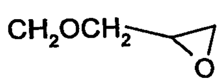
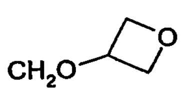
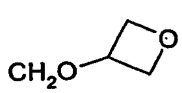
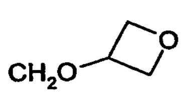
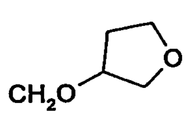
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0393	H	CH_3		H	Cl	O	0	
1.0394	H	CH_3		H	H	O	0	
1.0395	H	CH_3		H	F	O	0	
1.0396	H	CH_3		H	Cl	O	0	
1.0397	H	CH_3		H	H	O	0	
1.0398	H	CH_3		H	F	O	0	
1.0399	H	CH_3		H	Cl	O	0	
1.0400	H	CH_3		H	H	O	0	
1.0401	H	CH_3		H	F	O	0	
1.0402	H	CH_3		H	Cl	O	0	
1.0403	H	CH_3		H	H	O	0	
1.0404	H	CH_3		H	F	O	0	
1.0405	H	CH_3		H	Cl	O	0	
1.0406	H	CH_3		H	H	O	0	
1.0407	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	O	1	

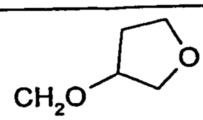
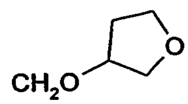
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0408	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	O	1	
1.0409	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	O	1	
1.0410	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	O	1	
1.0411	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	0	^1H NMR (300 MHz; $CDCl_3$) δ 17.0 (broad s, 1H); 7.62 (s, 2H); 6.47 (m, 1H); 6.35 (m, 1H); 4.73 (m, 2H); 3.50 (m, 3H); 3.39 (m, 2H); 3.31 (s, 3H); 3.30 (m, 1H); 2.72-2.50 (m, 2H).
1.0412	H	H	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2	0	
1.0413	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	0	
1.0414	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	0	
1.0415	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2	0	
1.0416	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	0	
1.0417	H	H	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2	0	
1.0418	H	H	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2	0	
1.0419	H	H	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2	0	
1.0420	H	H	CH_2OCH_2Ph	H	F	CH_2	0	
1.0421	H	H	CH_2OCH_2Ph	H	Cl	CH_2	0	
1.0422	H	H	CH_2OCH_2Ph	H	H	CH_2	0	
1.0423	H	H	$CH_2OCH_2CH_2OH$	H	F	CH_2	0	
1.0424	H	H	$CH_2OCH_2CH_2OH$	H	Cl	CH_2	0	
1.0425	H	H	$CH_2OCH_2CH_2OH$	H	H	CH_2	0	
1.0426	H	H	$CH_2OCH_2CH_2Cl$	H	F	CH_2	0	
1.0427	H	H	$CH_2OCH_2CH_2$ Cl	H	Cl	CH_2	0	
1.0428	H	H	$CH_2OCH_2CH_2$ Cl	H	H	CH_2	0	
1.0429	H	H	$CH_2OCH_2CF_3$	H	F	CH_2	0	
1.0430	H	H	$CH_2OCH_2CF_3$	H	Cl	CH_2	0	
1.0431	H	H	$CH_2OCH_2CF_3$	H	H	CH_2	0	
1.0432	H	H	$CH_2OCH_2CH{=}CH_2$	H	F	CH_2	0	
1.0433	H	H	$CH_2OCH_2CH{=}CH_2$	H	Cl	CH_2	0	
1.0434	H	H	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2	0	
1.0435	H	H	$CH_2O(CO)CH_3$	H	F	CH_2	0	

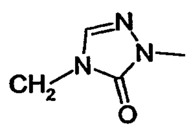
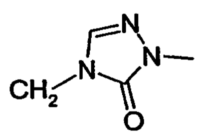
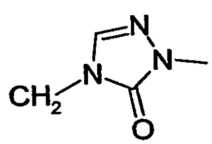
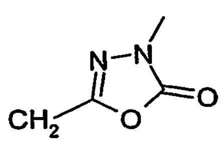
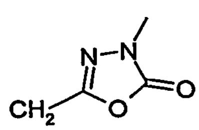
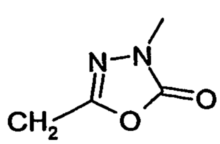
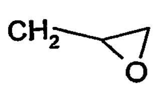
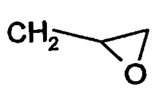
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0436	H	H	$CH_2O(CO)CH_3$	H	Cl	CH_2	0	
1.0437	H	H	$CH_2O(CO)CH_3$	H	H	CH_2	0	
1.0438	H	H	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2	0	
1.0439	H	H	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2	0	
1.0440	H	H	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2	0	
1.0441	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2	0	
1.0442	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2	0	
1.0443	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2	0	
1.0444	H	H		H	F	CH_2	0	
1.0445	H	H		H	Cl	CH_2	0	
1.0446	H	H		H	H	CH_2	0	
1.0447	H	H		H	F	CH_2	0	
1.0448	H	H		H	Cl	CH_2	0	
1.0449	H	H		H	H	CH_2	0	
1.0450	H	H		H	F	CH_2	0	
1.0451	H	H		H	Cl	CH_2	0	
1.0452	H	H		H	H	CH_2	0	

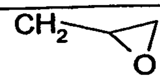
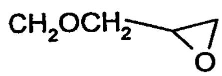
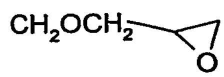
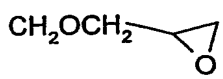
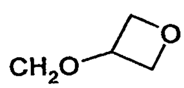
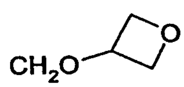
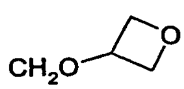
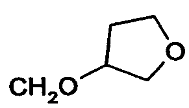
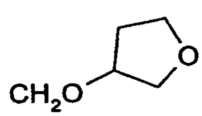
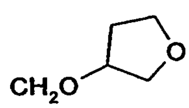
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0453	H	H		H	F	CH_2	0	
1.0454	H	H		H	Cl	CH_2	0	
1.0455	H	H		H	H	CH_2	0	
1.0456	H	H		H	F	CH_2	0	
1.0457	H	H		H	Cl	CH_2	0	
1.0458	H	H		H	H	CH_2	0	
1.0459	H	H		H	F	CH_2	0	
1.0460	H	H		H	Cl	CH_2	0	
1.0461	H	H		H	H	CH_2	0	
1.0462	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	1	
1.0463	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	1	
1.0464	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	1	
1.0465	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	1	
1.0466	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	0	
1.0467	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2	0	
1.0468	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	0	
1.0469	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	0	
1.0470	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2	0	
1.0471	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	0	
1.0472	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2	0	
1.0473	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2	0	
1.0474	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2	0	

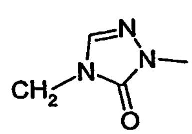
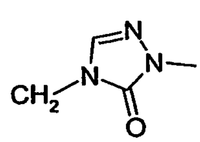
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0475	CH_3	CH_3	CH_2OCH_2Ph	H	F	CH_2	0	
1.0476	CH_3	CH_3	CH_2OCH_2Ph	H	Cl	CH_2	0	
1.0477	CH_3	CH_3	CH_2OCH_2Ph	H	H	CH_2	0	
1.0478	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	F	CH_2	0	
1.0479	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	CH_2	0	
1.0480	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	H	CH_2	0	
1.0481	CH_3	CH_3	$CH_2OCH_2CH_2Cl$	H	F	CH_2	0	
1.0482	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	Cl	CH_2	0	
1.0483	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	H	CH_2	0	
1.0484	CH_3	CH_3	$CH_2OCH_2CF_3$	H	F	CH_2	0	
1.0485	CH_3	CH_3	$CH_2OCH_2CF_3$	H	Cl	CH_2	0	
1.0486	CH_3	CH_3	$CH_2OCH_2CF_3$	H	H	CH_2	0	
1.0487	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	CH_2	0	
1.0488	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	CH_2	0	
1.0489	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2	0	
1.0490	CH_3	CH_3	$CH_2O(CO)CH_3$	H	F	CH_2	0	
1.0491	CH_3	CH_3	$CH_2O(CO)CH_3$	H	Cl	CH_2	0	
1.0492	CH_3	CH_3	$CH_2O(CO)CH_3$	H	H	CH_2	0	
1.0493	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2	0	
1.0494	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2	0	
1.0495	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2	0	
1.0496	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2	0	
1.0497	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2	0	
1.0498	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2	0	
1.0499	CH_3	CH_3		H	F	CH_2	0	
1.0500	CH_3	CH_3		H	Cl	CH_2	0	

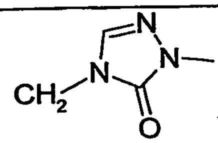
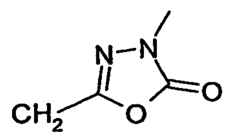
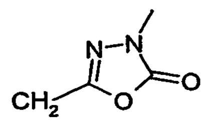
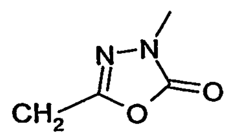
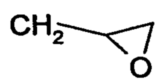
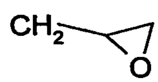
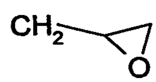
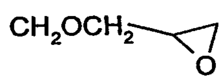
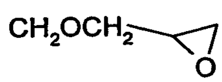
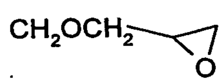
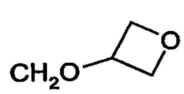
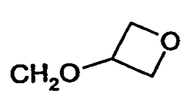
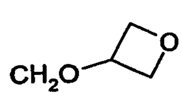
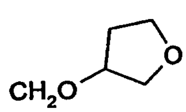
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0501	CH_3	CH_3		H	H	CH_2	0	
1.0502	CH_3	CH_3		H	F	CH_2	0	
1.0503	CH_3	CH_3		H	Cl	CH_2	0	
1.0504	CH_3	CH_3		H	H	CH_2	0	
1.0505	CH_3	CH_3		H	F	CH_2	0	
1.0506	CH_3	CH_3		H	Cl	CH_2	0	
1.0507	CH_3	CH_3		H	H	CH_2	0	
1.0508	CH_3	CH_3		H	F	CH_2	0	
1.0509	CH_3	CH_3		H	Cl	CH_2	0	
1.0510	CH_3	CH_3		H	H	CH_2	0	
1.0511	CH_3	CH_3		H	F	CH_2	0	
1.0512	CH_3	CH_3		H	Cl	CH_2	0	
1.0513	CH_3	CH_3		H	H	CH_2	0	
1.0514	CH_3	CH_3		H	F	CH_2	0	

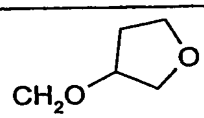
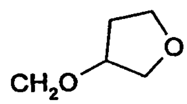
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0515	CH_3	CH_3		H	Cl	CH_2	0	
1.0516	CH_3	CH_3		H	H	CH_2	0	
1.0517	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	1	
1.0518	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	1	
1.0519	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	1	
1.0520	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	1	
1.0521	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	0	
1.0522	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2	0	
1.0523	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	0	
1.0524	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	0	
1.0525	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2	0	
1.0526	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	0	
1.0527	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2	0	
1.0528	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2	0	
1.0529	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2	0	
1.0530	H	CH_3	CH_2OCH_2Ph	H	F	CH_2	0	
1.0531	H	CH_3	CH_2OCH_2Ph	H	Cl	CH_2	0	
1.0532	H	CH_3	CH_2OCH_2Ph	H	H	CH_2	0	
1.0533	H	CH_3	$CH_2OCH_2CH_2OH$	H	F	CH_2	0	
1.0534	H	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	CH_2	0	
1.0535	H	CH_3	$CH_2OCH_2CH_2OH$	H	H	CH_2	0	
1.0536	H	CH_3	$CH_2OCH_2CH_2Cl$	H	F	CH_2	0	
1.0537	H	CH_3	$CH_2OCH_2CH_2\ Cl$	H	Cl	CH_2	0	
1.0538	H	CH_3	$CH_2OCH_2CH_2\ Cl$	H	H	CH_2	0	
1.0539	H	CH_3	$CH_2OCH_2CF_3$	H	F	CH_2	0	
1.0540	H	CH_3	$CH_2OCH_2CF_3$	H	Cl	CH_2	0	
1.0541	H	CH_3	$CH_2OCH_2CF_3$	H	H	CH_2	0	
1.0542	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	CH_2	0	
1.0543	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	CH_2	0	

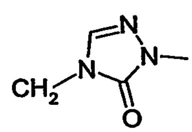
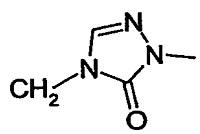
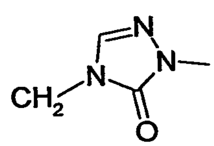
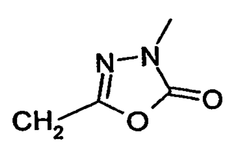
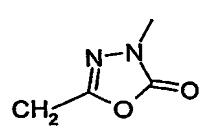
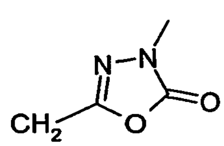
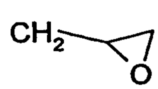
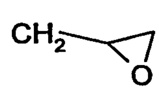
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0544	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2	0	
1.0545	H	CH_3	$CH_2O(CO)CH_3$	H	F	CH_2	0	
1.0546	H	CH_3	$CH_2O(CO)CH_3$	H	Cl	CH_2	0	
1.0547	H	CH_3	$CH_2O(CO)CH_3$	H	H	CH_2	0	
1.0548	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2	0	
1.0549	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2	0	
1.0550	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2	0	
1.0551	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2	0	
1.0552	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2	0	
1.0553	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2	0	
1.0554	H	CH_3		H	F	CH_2	0	
1.0555	H	CH_3		H	Cl	CH_2	0	
1.0556	H	CH_3		H	H	CH_2	0	
1.0557	H	CH_3		H	F	CH_2	0	
1.0558	H	CH_3		H	Cl	CH_2	0	
1.0559	H	CH_3		H	H	CH_2	0	
1.0560	H	CH_3		H	F	CH_2	0	
1.0561	H	CH_3		H	Cl	CH_2	0	

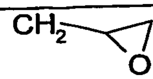
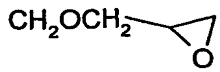
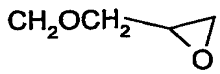
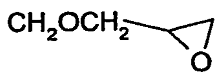
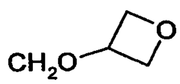
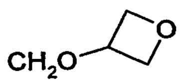
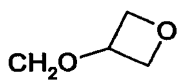
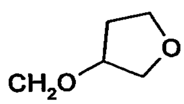
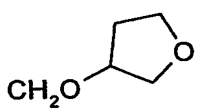
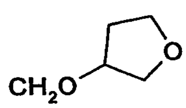
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0562	H	CH_3		H	H	CH_2	0	
1.0563	H	CH_3		H	F	CH_2	0	
1.0564	H	CH_3		H	Cl	CH_2	0	
1.0565	H	CH_3		H	H	CH_2	0	
1.0566	H	CH_3		H	F	CH_2	0	
1.0567	H	CH_3		H	Cl	CH_2	0	
1.0568	H	CH_3		H	H	CH_2	0	
1.0569	H	CH_3		H	F	CH_2	0	
1.0570	H	CH_3		H	Cl	CH_2	0	
1.0571	H	CH_3		H	H	CH_2	0	
1.0572	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	1	
1.0573	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	1	
1.0574	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	1	
1.0575	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	1	
1.0576	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2CH_2	0	resin
1.0577	H	H	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2CH_2	0	
1.0578	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2CH_2	0	
1.0579	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2CH_2	0	
1.0580	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2CH_2	0	
1.0581	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2CH_2	0	
1.0582	H	H	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2CH_2	0	

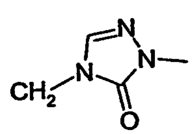
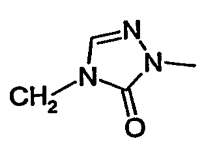
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0583	H	H	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2CH_2	0	
1.0584	H	H	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2CH_2	0	
1.0585	H	H	CH_2OCH_2Ph	H	F	CH_2CH_2	0	
1.0586	H	H	CH_2OCH_2Ph	H	Cl	CH_2CH_2	0	
1.0587	H	H	CH_2OCH_2Ph	H	H	CH_2CH_2	0	
1.0588	H	H	$CH_2OCH_2CH_2OH$	H	F	CH_2CH_2	0	
1.0589	H	H	$CH_2OCH_2CH_2OH$	H	Cl	CH_2CH_2	0	
1.0590	H	H	$CH_2OCH_2CH_2OH$	H	H	CH_2CH_2	0	
1.0591	H	H	$CH_2OCH_2CH_2Cl$	H	F	CH_2CH_2	0	
1.0592	H	H	$CH_2OCH_2CH_2$ Cl	H	Cl	CH_2CH_2	0	
1.0593	H	H	$CH_2OCH_2CH_2$ Cl	H	H	CH_2CH_2	0	
1.0594	H	H	$CH_2OCH_2CF_3$	H	F	CH_2CH_2	0	
1.0595	H	H	$CH_2OCH_2CF_3$	H	Cl	CH_2CH_2	0	
1.0596	H	H	$CH_2OCH_2CF_3$	H	H	CH_2CH_2	0	
1.0597	H	H	$CH_2OCH_2CH{=}CH_2$	H	F	CH_2CH_2	0	
1.0598	H	H	$CH_2OCH_2CH{=}CH_2$	H	Cl	CH_2CH_2	0	
1.0599	H	H	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2CH_2	0	
1.0600	H	H	$CH_2O(CO)CH_3$	H	F	CH_2CH_2	0	
1.0601	H	H	$CH_2O(CO)CH_3$	H	Cl	CH_2CH_2	0	
1.0602	H	H	$CH_2O(CO)CH_3$	H	H	CH_2CH_2	0	
1.0603	H	H	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2CH_2	0	
1.0604	H	H	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2CH_2	0	
1.0605	H	H	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2CH_2	0	
1.0606	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2CH_2	0	
1.0607	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2CH_2	0	
1.0608	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2CH_2	0	
1.0609	H	H		H	F	CH_2CH_2	0	
1.0610	H	H		H	Cl	CH_2CH_2	0	

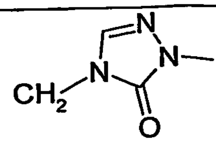
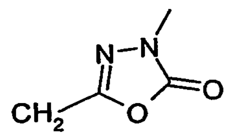
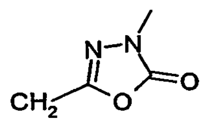
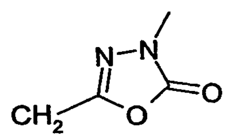
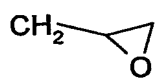
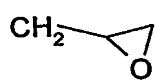
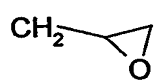
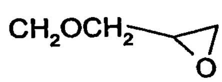
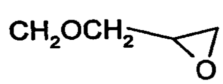
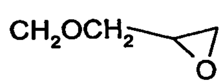
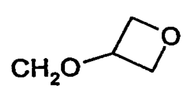
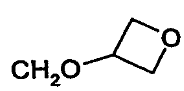
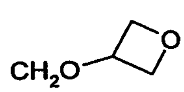
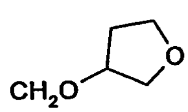
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0611	H	H		H	H	CH_2CH_2	0	
1.0612	H	H		H	F	CH_2CH_2	0	
1.0613	H	H		H	Cl	CH_2CH_2	0	
1.0614	H	H		H	H	CH_2CH_2	0	
1.0615	H	H		H	F	CH_2CH_2	0	
1.0616	H	H		H	Cl	CH_2CH_2	0	
1.0617	H	H		H	H	CH_2CH_2	0	
1.0618	H	H		H	F	CH_2CH_2	0	
1.0619	H	H		H	Cl	CH_2CH_2	0	
1.0620	H	H		H	H	CH_2CH_2	0	
1.0621	H	H		H	F	CH_2CH_2	0	
1.0622	H	H		H	Cl	CH_2CH_2	0	
1.0623	H	H		H	H	CH_2CH_2	0	
1.0624	H	H		H	F	CH_2CH_2	0	

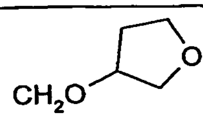
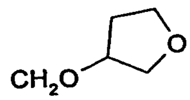
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0625	H	H		H	Cl	CH_2CH_2	0	
1.0626	H	H		H	H	CH_2CH_2	0	
1.0627	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2CH_2	1	
1.0628	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2CH_2	1	
1.0629	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2CH_2	1	
1.0630	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2CH_2	1	
1.0631	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2CH_2	0	
1.0632	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2CH_2	0	
1.0633	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2CH_2	0	
1.0634	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2CH_2	0	
1.0635	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2CH_2	0	
1.0636	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2CH_2	0	
1.0637	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2CH_2	0	
1.0638	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2CH_2	0	
1.0639	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2CH_2	0	
1.0640	CH_3	CH_3	CH_2OCH_2Ph	H	F	CH_2CH_2	0	
1.0641	CH_3	CH_3	CH_2OCH_2Ph	H	Cl	CH_2CH_2	0	
1.0642	CH_3	CH_3	CH_2OCH_2Ph	H	H	CH_2CH_2	0	
1.0643	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	F	CH_2CH_2	0	
1.0644	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	CH_2CH_2	0	
1.0645	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	H	CH_2CH_2	0	
1.0646	CH_3	CH_3	$CH_2OCH_2CH_2Cl$	H	F	CH_2CH_2	0	
1.0647	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	Cl	CH_2CH_2	0	
1.0648	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	H	CH_2CH_2	0	
1.0649	CH_3	CH_3	$CH_2OCH_2CF_3$	H	F	CH_2CH_2	0	
1.0650	CH_3	CH_3	$CH_2OCH_2CF_3$	H	Cl	CH_2CH_2	0	
1.0651	CH_3	CH_3	$CH_2OCH_2CF_3$	H	H	CH_2CH_2	0	
1.0652	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	CH_2CH_2	0	
1.0653	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	CH_2CH_2	0	

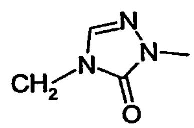
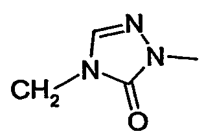
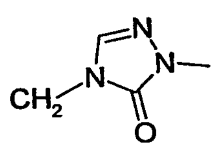
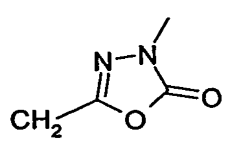
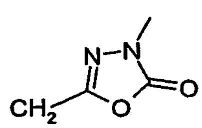
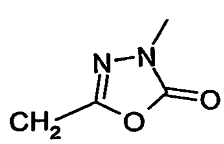
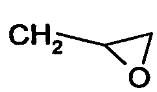
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0654	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2CH_2	0	
1.0655	CH_3	CH_3	$CH_2O(CO)CH_3$	H	F	CH_2CH_2	0	
1.0656	CH_3	CH_3	$CH_2O(CO)CH_3$	H	Cl	CH_2CH_2	0	
1.0657	CH_3	CH_3	$CH_2O(CO)CH_3$	H	H	CH_2CH_2	0	
1.0658	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2CH_2	0	
1.0659	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2CH_2	0	
1.0660	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2CH_2	0	
1.0661	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2CH_2	0	
1.0662	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2CH_2	0	
1.0663	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2CH_2	0	
1.0664	CH_3	CH_3		H	F	CH_2CH_2	0	
1.0665	CH_3	CH_3		H	Cl	CH_2CH_2	0	
1.0666	CH_3	CH_3		H	H	CH_2CH_2	0	
1.0667	CH_3	CH_3		H	F	CH_2CH_2	0	
1.0668	CH_3	CH_3		H	Cl	CH_2CH_2	0	
1.0669	CH_3	CH_3		H	H	CH_2CH_2	0	
1.0670	CH_3	CH_3		H	F	CH_2CH_2	0	
1.0671	CH_3	CH_3		H	Cl	CH_2CH_2	0	

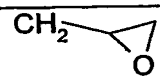
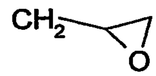
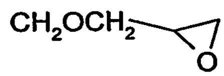
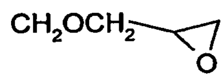
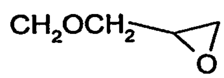
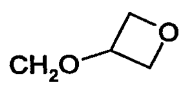
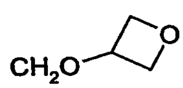
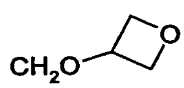
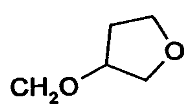
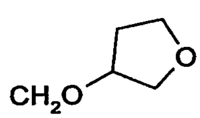
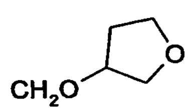
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0672	CH_3	CH_3		H	H	CH_2CH_2	0	
1.0673	CH_3	CH_3		H	F	CH_2CH_2	0	
1.0674	CH_3	CH_3		H	Cl	CH_2CH_2	0	
1.0675	CH_3	CH_3		H	H	CH_2CH_2	0	
1.0676	CH_3	CH_3		H	F	CH_2CH_2	0	
1.0677	CH_3	CH_3		H	Cl	CH_2CH_2	0	
1.0678	CH_3	CH_3		H	H	CH_2CH_2	0	
1.0679	CH_3	CH_3		H	F	CH_2CH_2	0	
1.0680	CH_3	CH_3		H	Cl	CH_2CH_2	0	
1.0681	CH_3	CH_3		H	H	CH_2CH_2	0	
1.0682	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2CH_2	1	
1.0683	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2CH_2	1	
1.0684	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2CH_2	1	
1.0685	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2CH_2	1	
1.0686	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2CH_2	0	
1.0687	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2CH_2	0	
1.0688	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2CH_2	0	
1.0689	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2CH_2	0	
1.0690	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2CH_2	0	
1.0691	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2CH_2	0	
1.0692	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2CH_2	0	

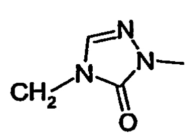
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0693	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2CH_2	0	
1.0694	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2CH_2	0	
1.0695	H	CH_3	CH_2OCH_2Ph	H	F	CH_2CH_2	0	
1.0696	H	CH_3	CH_2OCH_2Ph	H	Cl	CH_2CH_2	0	
1.0697	H	CH_3	CH_2OCH_2Ph	H	H	CH_2CH_2	0	
1.0698	H	CH_3	$CH_2OCH_2CH_2OH$	H	F	CH_2CH_2	0	
1.0699	H	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	CH_2CH_2	0	
1.0700	H	CH_3	$CH_2OCH_2CH_2OH$	H	H	CH_2CH_2	0	
1.0701	H	CH_3	$CH_2OCH_2CH_2Cl$	H	F	CH_2CH_2	0	
1.0702	H	CH_3	$CH_2OCH_2CH_2$ Cl	H	Cl	CH_2CH_2	0	
1.0703	H	CH_3	$CH_2OCH_2CH_2$ Cl	H	H	CH_2CH_2	0	
1.0704	H	CH_3	$CH_2OCH_2CF_3$	H	F	CH_2CH_2	0	
1.0705	H	CH_3	$CH_2OCH_2CF_3$	H	Cl	CH_2CH_2	0	
1.0706	H	CH_3	$CH_2OCH_2CF_3$	H	H	CH_2CH_2	0	
1.0707	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	CH_2CH_2	0	
1.0708	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	CH_2CH_2	0	
1.0709	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2CH_2	0	
1.0710	H	CH_3	$CH_2O(CO)CH_3$	H	F	CH_2CH_2	0	
1.0711	H	CH_3	$CH_2O(CO)CH_3$	H	Cl	CH_2CH_2	0	
1.0712	H	CH_3	$CH_2O(CO)CH_3$	H	H	CH_2CH_2	0	
1.0713	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2CH_2	0	
1.0714	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2CH_2	0	
1.0715	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2CH_2	0	
1.0716	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2CH_2	0	
1.0717	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2CH_2	0	
1.0718	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2CH_2	0	
1.0719	H	CH_3		H	F	CH_2CH_2	0	
1.0720	H	CH_3		H	Cl	CH_2CH_2	0	

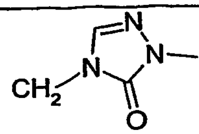
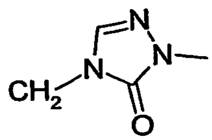
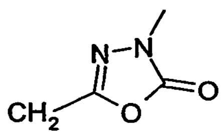
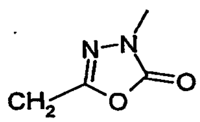
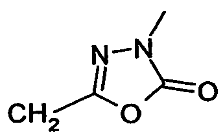
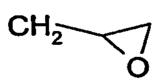
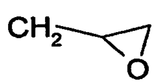
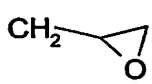
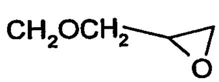
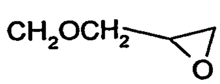
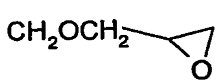
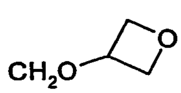
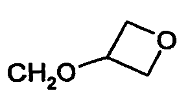
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0721	H	CH_3		H	H	CH_2CH_2	0	
1.0722	H	CH_3		H	F	CH_2CH_2	0	
1.0723	H	CH_3		H	Cl	CH_2CH_2	0	
1.0724	H	CH_3		H	H	CH_2CH_2	0	
1.0725	H	CH_3		H	F	CH_2CH_2	0	
1.0726	H	CH_3		H	Cl	CH_2CH_2	0	
1.0727	H	CH_3		H	H	CH_2CH_2	0	
1.0728	H	CH_3		H	F	CH_2CH_2	0	
1.0729	H	CH_3		H	Cl	CH_2CH_2	0	
1.0730	H	CH_3		H	H	CH_2CH_2	0	
1.0731	H	CH_3		H	F	CH_2CH_2	0	
1.0732	H	CH_3		H	Cl	CH_2CH_2	0	
1.0733	H	CH_3		H	H	CH_2CH_2	0	
1.0734	H	CH_3		H	F	CH_2CH_2	0	

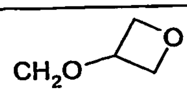
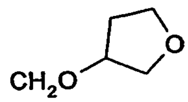
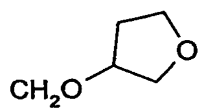
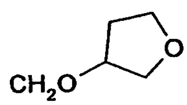
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0735	H	CH_3		H	Cl	CH_2CH_2	0	
1.0736	H	CH_3		H	H	CH_2CH_2	0	
1.0737	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2CH_2	1	
1.0738	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2CH_2	1	
1.0739	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2CH_2	1	
1.0740	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2CH_2	1	
1.0741	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2CH_2	1	
1.0742	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0743	H	H	$CH_2OCH_2CH_2OCH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0744	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0745	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0746	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0747	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0748	H	H	$CH_2N(CH_3)SO_2CH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0749	H	H	$CH_2N(CH_3)SO_2CH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0750	H	H	$CH_2N(CH_3)SO_2CH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0751	H	H	CH_2OCH_2Ph	H	F	$NC(O)C(CH_3)_3$	0	
1.0752	H	H	CH_2OCH_2Ph	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0753	H	H	CH_2OCH_2Ph	H	H	$NC(O)C(CH_3)_3$	0	
1.0754	H	H	$CH_2OCH_2CH_2OH$	H	F	$NC(O)C(CH_3)_3$	0	
1.0755	H	H	$CH_2OCH_2CH_2OH$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0756	H	H	$CH_2OCH_2CH_2OH$	H	H	$NC(O)C(CH_3)_3$	0	
1.0757	H	H	$CH_2OCH_2CH_2Cl$	H	F	$NC(O)C(CH_3)_3$	0	
1.0758	H	H	$CH_2OCH_2CH_2$ Cl	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0759	H	H	$CH_2OCH_2CH_2$ Cl	H	H	$NC(O)C(CH_3)_3$	0	
1.0760	H	H	$CH_2OCH_2CF_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0761	H	H	$CH_2OCH_2CF_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0762	H	H	$CH_2OCH_2CF_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0763	H	H	$CH_2OCH_2CH{=}CH_2$	H	F	$NC(O)C(CH_3)_3$	0	

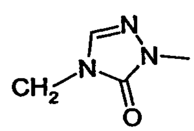
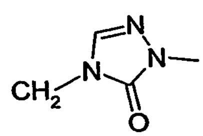
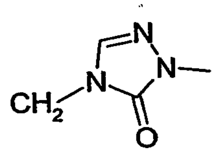
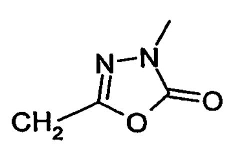
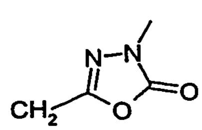
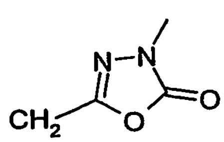
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0764	H	H	$CH_2OCH_2CH{=}CH_2$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0765	H	H	$CH_2OCH_2CH{=}CH_2$	H	H	$NC(O)C(CH_3)_3$	0	
1.0766	H	H	$CH_2O(CO)CH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0767	H	H	$CH_2O(CO)CH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0768	H	H	$CH_2O(CO)CH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0769	H	H	$CH_2OCH_2C{\equiv}CH$	H	F	$NC(O)C(CH_3)_3$	0	
1.0770	H	H	$CH_2OCH_2C{\equiv}CH$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0771	H	H	$CH_2OCH_2C{\equiv}CH$	H	H	$NC(O)C(CH_3)_3$	0	
1.0772	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0773	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0774	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0775	H	H		H	F	$NC(O)C(CH_3)_3$	0	
1.0776	H	H		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0777	H	H		H	H	$NC(O)C(CH_3)_3$	0	
1.0778	H	H		H	F	$NC(O)C(CH_3)_3$	0	
1.0779	H	H		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0780	H	H		H	H	$NC(O)C(CH_3)_3$	0	
1.0781	H	H		H	F	$NC(O)C(CH_3)_3$	0	

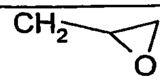
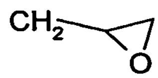
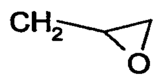
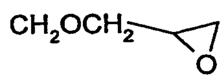
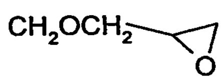
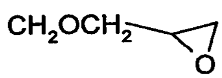
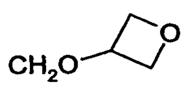
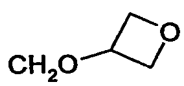
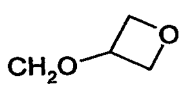
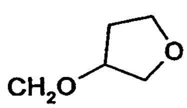
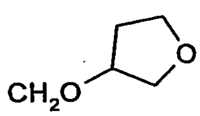
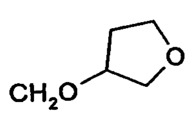
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0782	H	H		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0783	H	H		H	H	$NC(O)C(CH_3)_3$	0	
1.0784	H	H		H	F	$NC(O)C(CH_3)_3$	0	
1.0785	H	H		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0786	H	H		H	H	$NC(O)C(CH_3)_3$	0	
1.0787	H	H		H	F	$NC(O)C(CH_3)_3$	0	
1.0788	H	H		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0789	H	H		H	H	$NC(O)C(CH_3)_3$	0	
1.0790	H	H		H	F	$NC(O)C(CH_3)_3$	0	
1.0791	H	H		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0792	H	H		H	H	$NC(O)C(CH_3)_3$	0	
1.0793	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	$NC(O)C(CH_3)_3$	1	
1.0794	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	$NC(O)C(CH_3)_3$	1	
1.0795	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	$NC(O)C(CH_3)_3$	1	
1.0796	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	$NC(O)C(CH_3)_3$	1	
1.0797	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0798	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0799	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0800	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0801	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0802	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0803	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0804	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0805	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0806	CH_3	CH_3	CH_2OCH_2Ph	H	F	$NC(O)C(CH_3)_3$	0	
1.0807	CH_3	CH_3	CH_2OCH_2Ph	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0808	CH_3	CH_3	CH_2OCH_2Ph	H	H	$NC(O)C(CH_3)_3$	0	
1.0809	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	F	$NC(O)C(CH_3)_3$	0	
1.0810	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0811	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	H	$NC(O)C(CH_3)_3$	0	
1.0812	CH_3	CH_3	$CH_2OCH_2CH_2Cl$	H	F	$NC(O)C(CH_3)_3$	0	
1.0813	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0814	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	H	$NC(O)C(CH_3)_3$	0	
1.0815	CH_3	CH_3	$CH_2OCH_2CF_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0816	CH_3	CH_3	$CH_2OCH_2CF_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0817	CH_3	CH_3	$CH_2OCH_2CF_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0818	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	$NC(O)C(CH_3)_3$	0	
1.0819	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0820	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	$NC(O)C(CH_3)_3$	0	
1.0821	CH_3	CH_3	$CH_2O(CO)CH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0822	CH_3	CH_3	$CH_2O(CO)CH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0823	CH_3	CH_3	$CH_2O(CO)CH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0824	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	$NC(O)C(CH_3)_3$	0	
1.0825	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0826	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	$NC(O)C(CH_3)_3$	0	
1.0827	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0828	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0829	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0830	CH_3	CH_3		H	F	$NC(O)C(CH_3)_3$	0	

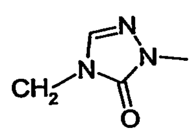
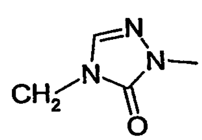
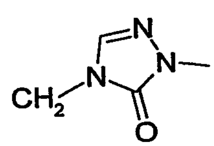
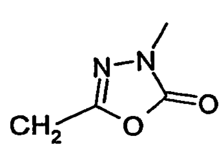
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0831	CH_3	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0832	CH_3	CH_3		H	H	$NC(O)C(CH_3)_3$	0	
1.0833	CH_3	CH_3		H	F	$NC(O)C(CH_3)_3$	0	
1.0834	CH_3	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0835	CH_3	CH_3		H	H	$NC(O)C(CH_3)_3$	0	
1.0836	CH_3	CH_3		H	F	$NC(O)C(CH_3)_3$	0	
1.0837	CH_3	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0838	CH_3	CH_3		H	H	$NC(O)C(CH_3)_3$	0	
1.0839	CH_3	CH_3		H	F	$NC(O)C(CH_3)_3$	0	
1.0840	CH_3	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0841	CH_3	CH_3		H	H	$NC(O)C(CH_3)_3$	0	
1.0842	CH_3	CH_3		H	F	$NC(O)C(CH_3)_3$	0	
1.0843	CH_3	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	

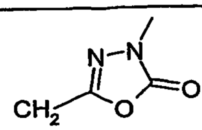
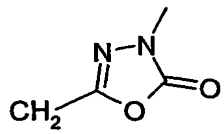
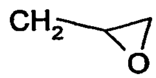
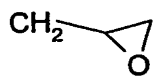
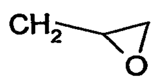
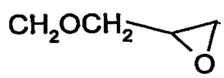
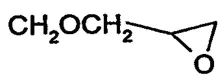
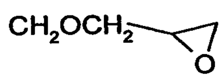
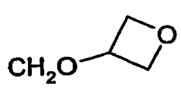
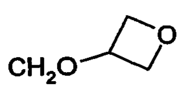
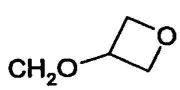
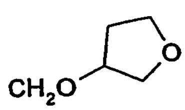
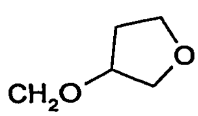
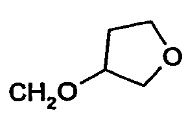
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0844	CH_3	CH_3		H	H	$NC(O)C(CH_3)_3$	0	
1.0845	CH_3	CH_3		H	F	$NC(O)C(CH_3)_3$	0	
1.0846	CH_3	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0847	CH_3	CH_3		H	H	$NC(O)C(CH_3)_3$	0	
1.0848	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	$NC(O)C(CH_3)_3$	1	
1.0849	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	$NC(O)C(CH_3)_3$	1	
1.0850	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	$NC(O)C(CH_3)_3$	1	
1.0851	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	$NC(O)C(CH_3)_3$	1	
1.0852	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0853	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0854	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0855	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0856	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0857	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0858	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0859	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0860	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0861	H	CH_3	CH_2OCH_2Ph	H	F	$NC(O)C(CH_3)_3$	0	
1.0862	H	CH_3	CH_2OCH_2Ph	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0863	H	CH_3	CH_2OCH_2Ph	H	H	$NC(O)C(CH_3)_3$	0	
1.0864	H	CH_3	$CH_2OCH_2CH_2OH$	H	F	$NC(O)C(CH_3)_3$	0	
1.0865	H	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0866	H	CH_3	$CH_2OCH_2CH_2OH$	H	H	$NC(O)C(CH_3)_3$	0	
1.0867	H	CH_3	$CH_2OCH_2CH_2Cl$	H	F	$NC(O)C(CH_3)_3$	0	
1.0868	H	CH_3	$CH_2OCH_2CH_2 Cl$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0869	H	CH_3	$CH_2OCH_2CH_2 Cl$	H	H	$NC(O)C(CH_3)_3$	0	
1.0870	H	CH_3	$CH_2OCH_2CF_3$	H	F	$NC(O)C(CH_3)_3$	0	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0871	H	CH_3	$CH_2OCH_2CF_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0872	H	CH_3	$CH_2OCH_2CF_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0873	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	$NC(O)C(CH_3)_3$	0	
1.0874	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0875	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	$NC(O)C(CH_3)_3$	0	
1.0876	H	CH_3	$CH_2O(CO)CH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0877	H	CH_3	$CH_2O(CO)CH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0878	H	CH_3	$CH_2O(CO)CH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0879	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	$NC(O)C(CH_3)_3$	0	
1.0880	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0881	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	$NC(O)C(CH_3)_3$	0	
1.0882	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	$NC(O)C(CH_3)_3$	0	
1.0883	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	$NC(O)C(CH_3)_3$	0	
1.0884	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	$NC(O)C(CH_3)_3$	0	
1.0885	H	CH_3		H	F	$NC(O)C(CH_3)_3$	0	
1.0886	H	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0887	H	CH_3		H	H	$NC(O)C(CH_3)_3$	0	
1.0888	H	CH_3		H	F	$NC(O)C(CH_3)_3$	0	
1.0889	H	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0890	H	CH_3		H	H	$NC(O)C(CH_3)_3$	0	

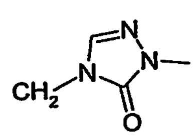
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0891	H	CH_3		H	F	$NC(O)C(CH_3)_3$	0	
1.0892	H	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0893	H	CH_3		H	H	$NC(O)C(CH_3)_3$	0	
1.0894	H	CH_3		H	F	$NC(O)C(CH_3)_3$	0	
1.0895	H	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0896	H	CH_3		H	H	$NC(O)C(CH_3)_3$	0	
1.0897	H	CH_3		H	F	$NC(O)C(CH_3)_3$	0	
1.0898	H	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0899	H	CH_3		H	H	$NC(O)C(CH_3)_3$	0	
1.0900	H	CH_3		H	F	$NC(O)C(CH_3)_3$	0	
1.0901	H	CH_3		H	Cl	$NC(O)C(CH_3)_3$	0	
1.0902	H	CH_3		H	H	$NC(O)C(CH_3)_3$	0	
1.0903	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	$NC(O)C(CH_3)_3$	1	
1.0904	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	$NC(O)C(CH_3)_3$	1	
1.0905	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	$NC(O)C(CH_3)_3$	1	
1.0906	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	$NC(O)C(CH_3)_3$	1	
1.0907	H	H	CH_3	H	F	$NSO_2N(CH_3)_2$	0	
1.0908	H	H	CH_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0909	H	H	CH_3	H	H	$NSO_2N(CH_3)_2$	0	

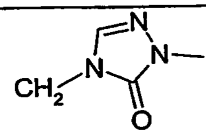
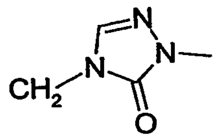
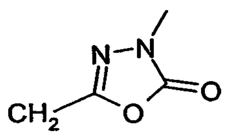
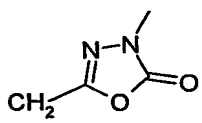
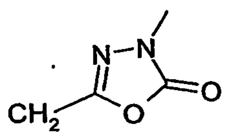
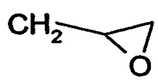
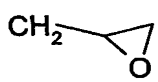
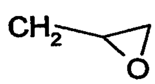
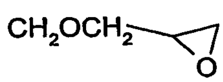
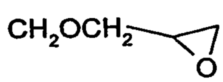
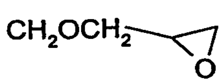
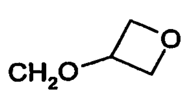
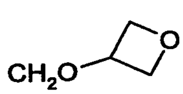
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0910	H	H	CH_3	CH_3	F	$NSO_2N(CH_3)_2$	0	
1.0911	H	H	CH_3	CH_3	Cl	$NSO_2N(CH_3)_2$	0	
1.0912	H	H	CH_3	CH_3	H	$NSO_2N(CH_3)_2$	0	
1.0913	H	H	CH_2CH_3	H	F	$NSO_2N(CH_3)_2$	0	
1.0914	H	H	CH_2CH_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0915	H	H	CH_2CH_3	H	H	$NSO_2N(CH_3)_2$	0	
1.0916	H	H	$CH_2CH_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.0917	H	H	$CH_2CH_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0918	H	H	$CH_2CH_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.0919	H	H	CH_2OCH_3	H	F	$NSO_2N(CH_3)_2$	0	
1.0920	H	H	CH_2OCH_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0921	H	H	CH_2OCH_3	H	H	$NSO_2N(CH_3)_2$	0	
1.0922	H	H	$CH_2OCH_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.0923	H	H	$CH_2OCH_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0924	H	H	$CH_2OCH_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.0925	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.0926	H	H	$CH_2OCH_2CH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0927	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.0928	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.0929	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0930	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.0931	H	H	$CH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.0932	H	H	$CH_2CH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0933	H	H	$CH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.0934	H	H	$CH_2OCH_2C{\equiv}CH$	H	F	$NSO_2N(CH_3)_2$	0	
1.0935	H	H	$CH_2OCH_2C{\equiv}CH$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0936	H	H	$CH_2OCH_2C{\equiv}CH$	H	H	$NSO_2N(CH_3)_2$	0	
1.0937	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.0938	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0939	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.0940	H	H	$CH_2CH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.0941	H	H	$CH_2CH_2CH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0942	H	H	$CH_2CH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	

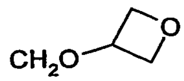
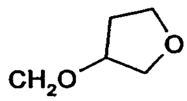
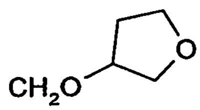
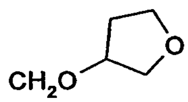
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0943	H	H	$CH_2OCH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.0944	H	H	$CH_2OCH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0945	H	H	$CH_2OCH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.0946	H	H	$CH_2N(CH_3)SO_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.0947	H	H	$CH_2N(CH_3)SO_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0948	H	H	$CH_2N(CH_3)SO_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.0949	H	H	CF_3	H	F	$NSO_2N(CH_3)_2$	0	
1.0950	H	H	CF_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0951	H	H	CF_3	H	H	$NSO_2N(CH_3)_2$	0	
1.0952	H	H	$CH_2OCH_2CF_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.0953	H	H	$CH_2OCH_2CF_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0954	H	H	$CH_2OCH_2CF_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.0955	H	H	CH_2OCH_2Ph	H	F	$NSO_2N(CH_3)_2$	0	
1.0956	H	H	CH_2OCH_2Ph	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0957	H	H	CH_2OCH_2Ph	H	H	$NSO_2N(CH_3)_2$	0	
1.0958	H	H	$CH_2OCH_2CH{=}CH_2$	H	F	$NSO_2N(CH_3)_2$	0	
1.0959	H	H	$CH_2OCH_2CH{=}CH_2$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0960	H	H	$CH_2OCH_2CH{=}CH_2$	H	H	$NSO_2N(CH_3)_2$	0	
1.0961	H	H		H	F	$NSO_2N(CH_3)_2$	0	
1.0962	H	H		H	Cl	$NSO_2N(CH_3)_2$	0	
1.0963	H	H		H	H	$NSO_2N(CH_3)_2$	0	
1.0964	H	H		H	F	$NSO_2N(CH_3)_2$	0	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0965	H	H		H	Cl	$NSO_2N(CH_3)_2$	0	
1.0966	H	H		H	H	$NSO_2N(CH_3)_2$	0	
1.0967	H	H		H	F	$NSO_2N(CH_3)_2$	0	
1.0968	H	H		H	Cl	$NSO_2N(CH_3)_2$	0	
1.0969	H	H		H	H	$NSO_2N(CH_3)_2$	0	
1.0970	H	H		H	F	$NSO_2N(CH_3)_2$	0	
1.0971	H	H		H	Cl	$NSO_2N(CH_3)_2$	0	
1.0972	H	H		H	H	$NSO_2N(CH_3)_2$	0	
1.0973	H	H		H	F	$NSO_2N(CH_3)_2$	0	
1.0974	H	H		H	Cl	$NSO_2N(CH_3)_2$	0	
1.0975	H	H		H	H	$NSO_2N(CH_3)_2$	0	
1.0976	H	H		H	F	$NSO_2N(CH_3)_2$	0	
1.0977	H	H		H	Cl	$NSO_2N(CH_3)_2$	0	
1.0978	H	H		H	H	$NSO_2N(CH_3)_2$	0	
1.0979	H	H	CH_3	H	F	$NSO_2N(CH_3)_2$	1	

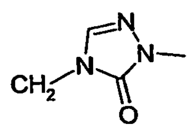
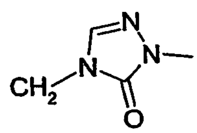
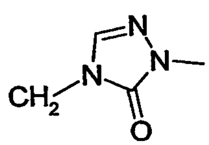
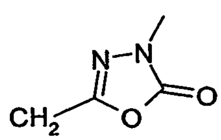
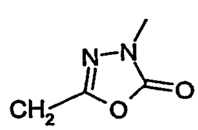
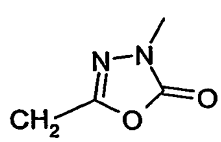
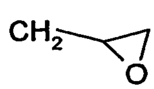
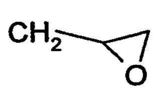
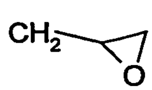
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.0980	H	H	CH_2OCH_3	H	F	$NSO_2N(CH_3)_2$	1	
1.0981	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	1	
1.0982	H	H	$CH_2CH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	1	
1.0983	H	H	CH_2CH_3	H	F	$NSO_2N(CH_3)_2$	1	
1.0984	H	H	CH_3	H	H	$NSO_2N(CH_3)_2$	1	
1.0985	H	H	CH_2OCH_3	H	H	$NSO_2N(CH_3)_2$	1	
1.0986	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	1	
1.0987	H	H	$CH_2CH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	1	
1.0988	H	H	CH_2CH_3	H	H	$NSO_2N(CH_3)_2$	1	
1.0989	CH_3	CH_3	CH_3	H	F	$NSO_2N(CH_3)_2$	0	
1.0990	CH_3	CH_3	CH_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0991	CH_3	CH_3	CH_3	H	H	$NSO_2N(CH_3)_2$	0	
1.0992	CH_3	CH_3	CH_3	CH_3	F	$NSO_2N(CH_3)_2$	0	
1.0993	CH_3	CH_3	CH_3	CH_3	Cl	$NSO_2N(CH_3)_2$	0	
1.0994	CH_3	CH_3	CH_3	CH_3	H	$NSO_2N(CH_3)_2$	0	
1.0995	CH_3	CH_3	CH_2CH_3	H	F	$NSO_2N(CH_3)_2$	0	
1.0996	CH_3	CH_3	CH_2CH_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.0997	CH_3	CH_3	CH_2CH_3	H	H	$NSO_2N(CH_3)_2$	0	
1.0998	CH_3	CH_3	$CH_2CH_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.0999	CH_3	CH_3	$CH_2CH_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1000	CH_3	CH_3	$CH_2CH_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1001	CH_3	CH_3	CH_2OCH_3	H	F	$NSO_2N(CH_3)_2$	0	
1.1002	CH_3	CH_3	CH_2OCH_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1003	CH_3	CH_3	CH_2OCH_3	H	H	$NSO_2N(CH_3)_2$	0	
1.1004	CH_3	CH_3	$CH_2OCH_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1005	CH_3	CH_3	$CH_2OCH_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1006	CH_3	CH_3	$CH_2OCH_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1007	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1008	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1009	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1010	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1011	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1012	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	

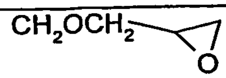
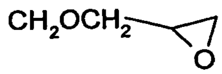
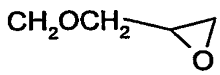
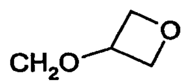
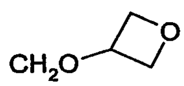
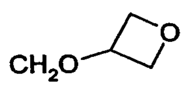
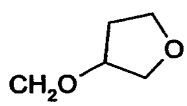
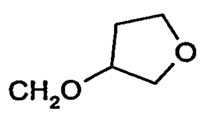
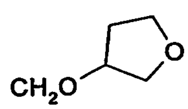
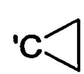
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.1013	CH_3	CH_3	$CH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1014	CH_3	CH_3	$CH_2CH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1015	CH_3	CH_3	$CH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1016	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	$NSO_2N(CH_3)_2$	0	
1.1017	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1018	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	$NSO_2N(CH_3)_2$	0	
1.1019	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1020	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1021	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1022	CH_3	CH_3	$CH_2CH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1023	CH_3	CH_3	$CH_2CH_2CH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1024	CH_3	CH_3	$CH_2CH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1025	CH_3	CH_3	$CH_2OCH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1026	CH_3	CH_3	$CH_2OCH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1027	CH_3	CH_3	$CH_2OCH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1028	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1029	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1030	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1031	CH_3	CH_3	CF_3	H	F	$NSO_2N(CH_3)_2$	0	
1.1032	CH_3	CH_3	CF_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1033	CH_3	CH_3	CF_3	H	H	$NSO_2N(CH_3)_2$	0	
1.1034	CH_3	CH_3	$CH_2OCH_2CF_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1035	CH_3	CH_3	$CH_2OCH_2CF_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1036	CH_3	CH_3	$CH_2OCH_2CF_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1037	CH_3	CH_3	CH_2OCH_2Ph	H	F	$NSO_2N(CH_3)_2$	0	
1.1038	CH_3	CH_3	CH_2OCH_2Ph	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1039	CH_3	CH_3	CH_2OCH_2Ph	H	H	$NSO_2N(CH_3)_2$	0	
1.1040	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	$NSO_2N(CH_3)_2$	0	
1.1041	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1042	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	$NSO_2N(CH_3)_2$	0	
1.1043	CH_3	CH_3		H	F	$NSO_2N(CH_3)_2$	0	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.1044	CH_3	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	
1.1045	CH_3	CH_3		H	H	$NSO_2N(CH_3)_2$	0	
1.1046	CH_3	CH_3		H	F	$NSO_2N(CH_3)_2$	0	
1.1047	CH_3	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	
1.1048	CH_3	CH_3		H	H	$NSO_2N(CH_3)_2$	0	
1.1049	CH_3	CH_3		H	F	$NSO_2N(CH_3)_2$	0	
1.1050	CH_3	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	
1.1051	CH_3	CH_3		H	H	$NSO_2N(CH_3)_2$	0	
1.1052	CH_3	CH_3		H	F	$NSO_2N(CH_3)_2$	0	
1.1053	CH_3	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	
1.1054	CH_3	CH_3		H	H	$NSO_2N(CH_3)_2$	0	
1.1055	CH_3	CH_3		H	F	$NSO_2N(CH_3)_2$	0	
1.1056	CH_3	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.1057	CH_3	CH_3		H	H	$NSO_2N(CH_3)_2$	0	
1.1058	CH_3	CH_3		H	F	$NSO_2N(CH_3)_2$	0	
1.1059	CH_3	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	
1.1060	CH_3	CH_3		H	H	$NSO_2N(CH_3)_2$	0	
1.1061	CH_3	CH_3	CH_3	H	F	$NSO_2N(CH_3)_2$	1	
1.1062	CH_3	CH_3	CH_2OCH_3	H	F	$NSO_2N(CH_3)_2$	1	
1.1063	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	1	
1.1064	CH_3	CH_3	$CH_2CH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	1	
1.1065	CH_3	CH_3	CH_2CH_3	H	F	$NSO_2N(CH_3)_2$	1	
1.1066	CH_3	CH_3	CH_3	H	H	$NSO_2N(CH_3)_2$	1	
1.1067	CH_3	CH_3	CH_2OCH_3	H	H	$NSO_2N(CH_3)_2$	1	
1.1068	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	1	
1.1069	CH_3	CH_3	$CH_2CH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	1	
1.1070	CH_3	CH_3	CH_2CH_3	H	H	$NSO_2N(CH_3)_2$	1	
1.1071	H	CH_3	CH_3	H	F	$NSO_2N(CH_3)_2$	0	
1.1072	H	CH_3	CH_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1073	H	CH_3	CH_3	H	H	$NSO_2N(CH_3)_2$	0	
1.1074	H	CH_3	CH_3	CH_3	F	$NSO_2N(CH_3)_2$	0	
1.1075	H	CH_3	CH_3	CH_3	Cl	$NSO_2N(CH_3)_2$	0	
1.1076	H	CH_3	CH_3	CH_3	H	$NSO_2N(CH_3)_2$	0	
1.1077	H	CH_3	CH_2CH_3	H	F	$NSO_2N(CH_3)_2$	0	
1.1078	H	CH_3	CH_2CH_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1079	H	CH_3	CH_2CH_3	H	H	$NSO_2N(CH_3)_2$	0	
1.1080	H	CH_3	$CH_2CH_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1081	H	CH_3	$CH_2CH_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1082	H	CH_3	$CH_2CH_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1083	H	CH_3	CH_2OCH_3	H	F	$NSO_2N(CH_3)_2$	0	

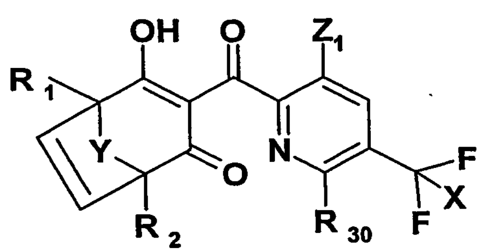
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.1084	H	CH_3	CH_2OCH_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1085	H	CH_3	CH_2OCH_3	H	H	$NSO_2N(CH_3)_2$	0	
1.1086	H	CH_3	$CH_2OCH_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1087	H	CH_3	$CH_2OCH_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1088	H	CH_3	$CH_2OCH_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1089	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1090	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1091	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1092	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1093	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1094	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1095	H	CH_3	$CH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1096	H	CH_3	$CH_2CH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1097	H	CH_3	$CH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1098	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	$NSO_2N(CH_3)_2$	0	
1.1099	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1100	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	$NSO_2N(CH_3)_2$	0	
1.1101	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1102	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1103	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1104	H	CH_3	$CH_2CH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1105	H	CH_3	$CH_2CH_2CH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1106	H	CH_3	$CH_2CH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1107	H	CH_3	$CH_2OCH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1108	H	CH_3	$CH_2OCH_2OCH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1109	H	CH_3	$CH_2OCH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1110	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	$NSO_2N(CH_3)_2$	0	
1.1111	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1112	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1113	H	CH_3	CF_3	H	F	$NSO_2N(CH_3)_2$	0	
1.1114	H	CH_3	CF_3	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1115	H	CH_3	CF_3	H	H	$NSO_2N(CH_3)_2$	0	
1.1116	H	CH_3	$CH_2OCH_2CF_3$	H	F	$NSO_2N(CH_3)_2$	0	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.1117	H	CH_3	$CH_2OCH_2CF_3$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1118	H	CH_3	$CH_2OCH_2CF_3$	H	H	$NSO_2N(CH_3)_2$	0	
1.1119	H	CH_3	CH_2OCH_2Ph	H	F	$NSO_2N(CH_3)_2$	0	
1.1120	H	CH_3	CH_2OCH_2Ph	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1121	H	CH_3	CH_2OCH_2Ph	H	H	$NSO_2N(CH_3)_2$	0	
1.1122	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	$NSO_2N(CH_3)_2$	0	
1.1123	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	$NSO_2N(CH_3)_2$	0	
1.1124	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	$NSO_2N(CH_3)_2$	0	
1.1125	H	CH_3		H	F	$NSO_2N(CH_3)_2$	0	
1.1126	H	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	
1.1127	H	CH_3		H	H	$NSO_2N(CH_3)_2$	0	
1.1128	H	CH_3		H	F	$NSO_2N(CH_3)_2$	0	
1.1129	H	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	
1.1130	H	CH_3		H	H	$NSO_2N(CH_3)_2$	0	
1.1131	H	CH_3		H	F	$NSO_2N(CH_3)_2$	0	
1.1132	H	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	
1.1133	H	CH_3		H	H	$NSO_2N(CH_3)_2$	0	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
1.1134	H	CH_3		H	F	$NSO_2N(CH_3)_2$	0	
1.1135	H	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	
1.1136	H	CH_3		H	H	$NSO_2N(CH_3)_2$	0	
1.1137	H	CH_3		H	F	$NSO_2N(CH_3)_2$	0	
1.1138	H	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	
1.1139	H	CH_3		H	H	$NSO_2N(CH_3)_2$	0	
1.1140	H	CH_3		H	F	$NSO_2N(CH_3)_2$	0	
1.1141	H	CH_3		H	Cl	$NSO_2N(CH_3)_2$	0	
1.1142	H	CH_3		H	H	$NSO_2N(CH_3)_2$	0	
1.1143	H	CH_3	CH_3	H	F	$NSO_2N(CH_3)_2$	1	
1.1144	H	CH_3	CH_2OCH_3	H	F	$NSO_2N(CH_3)_2$	1	
1.1145	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	1	
1.1146	H	CH_3	$CH_2CH_2CH_2OCH_3$	H	F	$NSO_2N(CH_3)_2$	1	
1.1147	H	CH_3	CH_2CH_3	H	F	$NSO_2N(CH_3)_2$	1	
1.1148	H	CH_3	CH_3	H	H	$NSO_2N(CH_3)_2$	1	
1.1149	H	CH_3	CH_2OCH_3	H	H	$NSO_2N(CH_3)_2$	1	
1.1150	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	1	
1.1151	H	CH_3	$CH_2CH_2CH_2OCH_3$	H	H	$NSO_2N(CH_3)_2$	1	
1.1152	H	CH_3	CH_2CH_3	H	H	$NSO_2N(CH_3)_2$	1	
1.1153	H	H	CH_3	H	F		0	^1H NMR (300 MHz; $CDCl_3$) δ 16.58 (s, 1H); 7.55 (m, 2H); 6.48 (m, 1H); 6.40 (m, 1H); 2.94

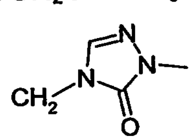
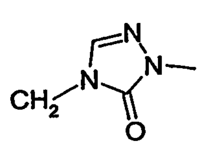
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Physical data
								(m, 1H); 2.72 (m, 1H); 2.50 (s, 3H); 0.90-0.65 (m, 4H).
1.1154	H	H	CH_3	H	F	$C(=C(CH_3)_2)$	0	^1H NMR (300 MHz; $CDCl_3$) δ 16.25 (s, 1H); 7.56 (m, 2H); 6.52 (m, 1H); 6.45 (m, 1H); 4.20 (m, 1H); 3.98 (m, 1H); 2.45 (s, 3H); 1.80 (s, 3H); 1.71 (s, 3H).
1.1155	H	H	CH_3	H	H	$CH_2CH(COOCH_3)$	0	R_7= Br; ^1H NMR (300 MHz; $CDCl_3$) i.a. δ 7.44 (d, 2H); 6.54 (t, 1H); 6.53 + 6.42 (2d, 1H); 3.71 + 3.68 (2s, 3H); 2.41 + 2.40 (2s, 3H); tautomeric mixture.
1.1156	H	H	CH_3	H	H	$CH_2CH(COOCH_3)$	0	R_7=H; NEt_3 salt (Example P14)

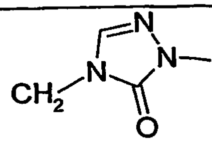
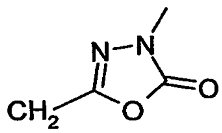
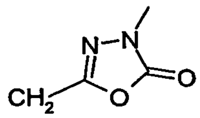
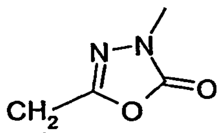
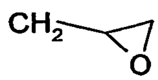
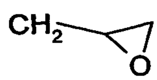
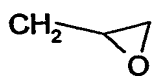
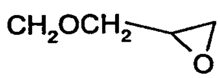
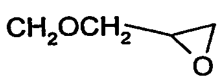
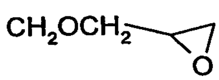
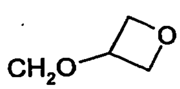
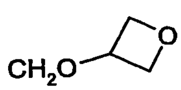
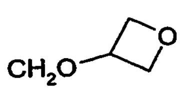
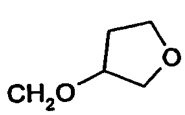
Table 2: Compounds of formula Ic:

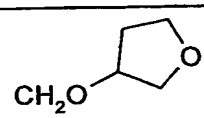
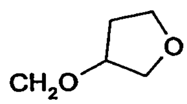


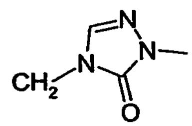
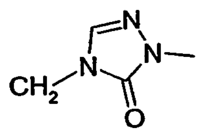
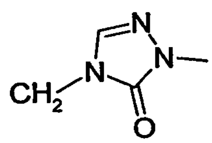
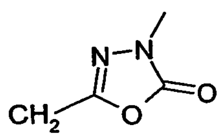
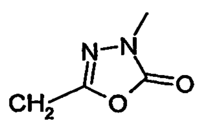
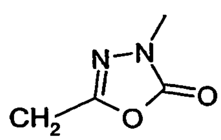
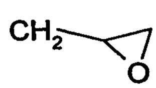
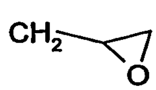
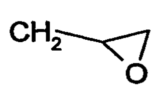
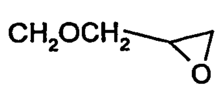
(Ic)

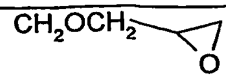
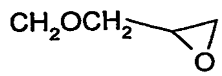
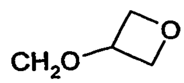
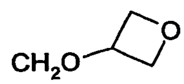
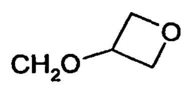
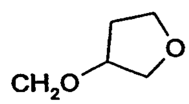
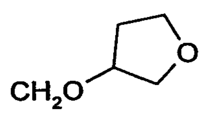
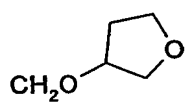
No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0000	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	
2.0001	H	H	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2	
2.0002	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	
2.0003	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	
2.0004	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2	
2.0005	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	

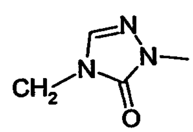
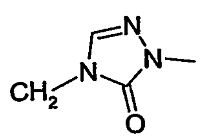
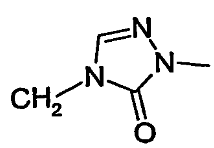
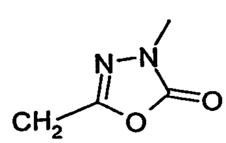
No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0006	H	H	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2	
2.0007	H	H	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2	
2.0008	H	H	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2	
2.0009	H	H	CH_2OCH_2Ph	H	F	CH_2	
2.0010	H	H	CH_2OCH_2Ph	H	Cl	CH_2	
2.0011	H	H	CH_2OCH_2Ph	H	H	CH_2	
2.0012	H	H	$CH_2OCH_2CH_2OH$	H	F	CH_2	
2.0013	H	H	$CH_2OCH_2CH_2OH$	H	Cl	CH_2	
2.0014	H	H	$CH_2OCH_2CH_2OH$	H	H	CH_2	
2.0015	H	H	$CH_2OCH_2CH_2Cl$	H	F	CH_2	
2.0016	H	H	$CH_2OCH_2CH_2$ Cl	H	Cl	CH_2	
2.0017	H	H	$CH_2OCH_2CH_2$ Cl	H	H	CH_2	
2.0018	H	H	$CH_2OCH_2CF_3$	H	F	CH_2	
2.0019	H	H	$CH_2OCH_2CF_3$	H	Cl	CH_2	
2.0020	H	H	$CH_2OCH_2CF_3$	H	H	CH_2	
2.0021	H	H	$CH_2OCH_2CH{=}CH_2$	H	F	CH_2	
2.0022	H	H	$CH_2OCH_2CH{=}CH_2$	H	Cl	CH_2	
2.0023	H	H	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2	
2.0024	H	H	$CH_2O(CO)CH_3$	H	F	CH_2	
2.0025	H	H	$CH_2O(CO)CH_3$	H	Cl	CH_2	
2.0026	H	H	$CH_2O(CO)CH_3$	H	H	CH_2	
2.0027	H	H	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2	
2.0028	H	H	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2	
2.0029	H	H	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2	
2.0030	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2	
2.0031	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2	
2.0032	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2	
2.0033	H	H		H	F	CH_2	
2.0034	H	H		H	Cl	CH_2	

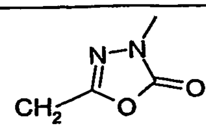
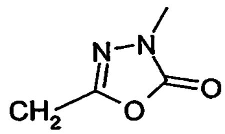
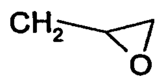
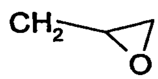
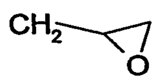
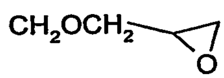
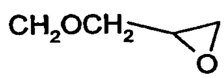
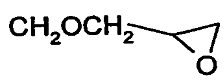
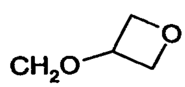
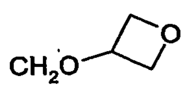
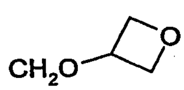
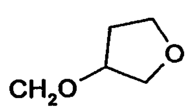
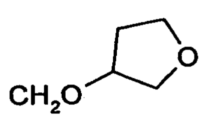
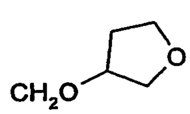
No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0035	H	H		H	H	CH_2	
2.0036	H	H		H	F	CH_2	
2.0037	H	H		H	Cl	CH_2	
2.0038	H	H		H	H	CH_2	
2.0039	H	H		H	F	CH_2	
2.0040	H	H		H	Cl	CH_2	
2.0041	H	H		H	H	CH_2	
2.0042	H	H		H	F	CH_2	
2.0043	H	H		H	Cl	CH_2	
2.0044	H	H		H	H	CH_2	
2.0045	H	H		H	F	CH_2	
2.0046	H	H		H	Cl	CH_2	
2.0047	H	H		H	H	CH_2	
2.0048	H	H		H	F	CH_2	

No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0049	H	H		H	Cl	CH_2	
2.0050	H	H		H	H	CH_2	
2.0051	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	
2.0052	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2	
2.0053	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	
2.0054	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	
2.0055	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2	
2.0056	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	
2.0057	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2	
2.0058	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2	
2.0059	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2	
2.0060	CH_3	CH_3	CH_2OCH_2Ph	H	F	CH_2	
2.0061	CH_3	CH_3	CH_2OCH_2Ph	H	Cl	CH_2	
2.0062	CH_3	CH_3	CH_2OCH_2Ph	H	H	CH_2	
2.0063	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	F	CH_2	
2.0064	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	CH_2	
2.0065	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	H	CH_2	
2.0066	CH_3	CH_3	$CH_2OCH_2CH_2Cl$	H	F	CH_2	
2.0067	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	Cl	CH_2	
2.0068	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	H	CH_2	
2.0069	CH_3	CH_3	$CH_2OCH_2CF_3$	H	F	CH_2	
2.0070	CH_3	CH_3	$CH_2OCH_2CF_3$	H	Cl	CH_2	
2.0071	CH_3	CH_3	$CH_2OCH_2CF_3$	H	H	CH_2	
2.0072	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	CH_2	
2.0073	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	CH_2	
2.0074	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2	
2.0075	CH_3	CH_3	$CH_2O(CO)CH_3$	H	F	CH_2	
2.0076	CH_3	CH_3	$CH_2O(CO)CH_3$	H	Cl	CH_2	
2.0077	CH_3	CH_3	$CH_2O(CO)CH_3$	H	H	CH_2	

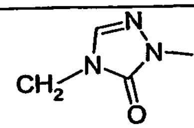
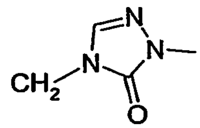
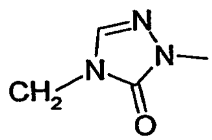
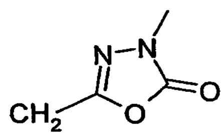
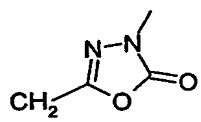
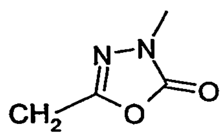
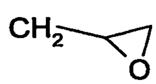
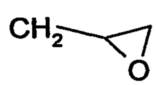
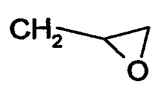
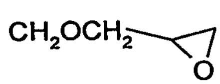
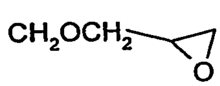
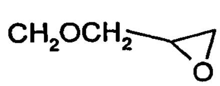
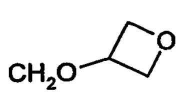
No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0078	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2	
2.0079	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2	
2.0080	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2	
2.0081	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2	
2.0082	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2	
2.0083	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2	
2.0084	CH_3	CH_3		H	F	CH_2	
2.0085	CH_3	CH_3		H	Cl	CH_2	
2.0086	CH_3	CH_3		H	H	CH_2	
2.0087	CH_3	CH_3		H	F	CH_2	
2.0088	CH_3	CH_3		H	Cl	CH_2	
2.0089	CH_3	CH_3		H	H	CH_2	
2.0090	CH_3	CH_3		H	F	CH_2	
2.0091	CH_3	CH_3		H	Cl	CH_2	
2.0092	CH_3	CH_3		H	H	CH_2	
2.0093	CH_3	CH_3		H	F	CH_2	

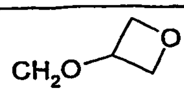
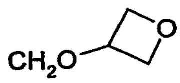
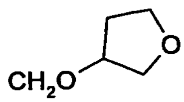
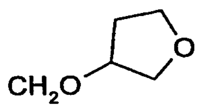
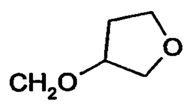
No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0094	CH_3	CH_3		H	Cl	CH_2	
2.0095	CH_3	CH_3		H	H	CH_2	
2.0096	CH_3	CH_3		H	F	CH_2	
2.0097	CH_3	CH_3		H	Cl	CH_2	
2.0098	CH_3	CH_3		H	H	CH_2	
2.0099	CH_3	CH_3		H	F	CH_2	
2.0100	CH_3	CH_3		H	Cl	CH_2	
2.0101	CH_3	CH_3		H	H	CH_2	
2.0102	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	
2.0103	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2	
2.0104	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	
2.0105	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	
2.0106	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2	
2.0107	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	
2.0108	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2	
2.0109	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2	
2.0110	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2	
2.0111	H	CH_3	CH_2OCH_2Ph	H	F	CH_2	
2.0112	H	CH_3	CH_2OCH_2Ph	H	Cl	CH_2	
2.0113	H	CH_3	CH_2OCH_2Ph	H	H	CH_2	
2.0114	H	CH_3	$CH_2OCH_2CH_2OH$	H	F	CH_2	
2.0115	H	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	CH_2	
2.0116	H	CH_3	$CH_2OCH_2CH_2OH$	H	H	CH_2	

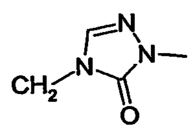
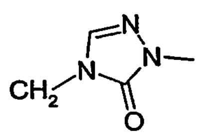
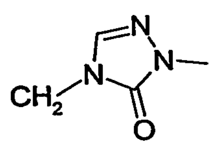
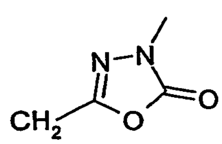
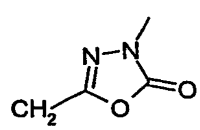
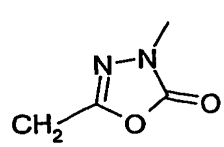
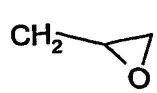
No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0117	H	CH_3	$CH_2OCH_2CH_2Cl$	H	F	CH_2	
2.0118	H	CH_3	$CH_2OCH_2CH_2Cl$	H	Cl	CH_2	
2.0119	H	CH_3	$CH_2OCH_2CH_2Cl$	H	H	CH_2	
2.0120	H	CH_3	$CH_2OCH_2CF_3$	H	F	CH_2	
2.0121	H	CH_3	$CH_2OCH_2CF_3$	H	Cl	CH_2	
2.0122	H	CH_3	$CH_2OCH_2CF_3$	H	H	CH_2	
2.0123	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	CH_2	
2.0124	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	CH_2	
2.0125	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2	
2.0126	H	CH_3	$CH_2O(CO)CH_3$	H	F	CH_2	
2.0127	H	CH_3	$CH_2O(CO)CH_3$	H	Cl	CH_2	
2.0128	H	CH_3	$CH_2O(CO)CH_3$	H	H	CH_2	
2.0129	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2	
2.0130	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2	
2.0131	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2	
2.0132	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2	
2.0133	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2	
2.0134	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2	
2.0135	H	CH_3		H	F	CH_2	
2.0136	H	CH_3		H	Cl	CH_2	
2.0137	H	CH_3		H	H	CH_2	
2.0138	H	CH_3		H	F	CH_2	

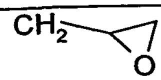
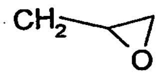
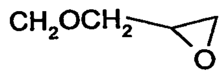
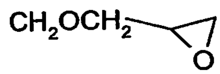
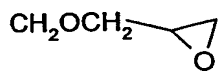
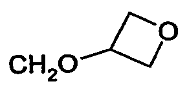
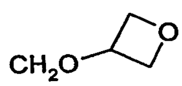
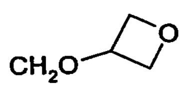
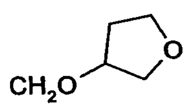
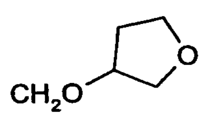
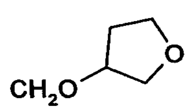
No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0139	H	CH_3		H	Cl	CH_2	
2.0140	H	CH_3		H	H	CH_2	
2.0141	H	CH_3		H	F	CH_2	
2.0142	H	CH_3		H	Cl	CH_2	
2.0143	H	CH_3		H	H	CH_2	
2.0144	H	CH_3		H	F	CH_2	
2.0145	H	CH_3		H	Cl	CH_2	
2.0146	H	CH_3		H	H	CH_2	
2.0147	H	CH_3		H	F	CH_2	
2.0148	H	CH_3		H	Cl	CH_2	
2.0149	H	CH_3		H	H	CH_2	
2.0150	H	CH_3		H	F	CH_2	
2.0151	H	CH_3		H	Cl	CH_2	
2.0152	H	CH_3		H	H	CH_2	
2.0153	H	H	$CH_2OCH_2CH_2OCH_3$	CH_3	F	CH_2	

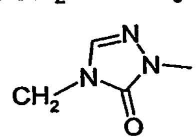
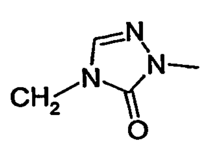
No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0154	H	H	$CH_2OCH_2CH_2OCH_3$	CH_3	Cl	CH_2	
2.0155	H	H	$CH_2OCH_2CH_2OCH_3$	CH_3	H	CH_2	
2.0156	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	F	CH_2	
2.0157	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	Cl	CH_2	
2.0158	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	H	CH_2	
2.0159	H	H	$CH_2N(CH_3)SO_2CH_3$	CH_3	F	CH_2	
2.0160	H	H	$CH_2N(CH_3)SO_2CH_3$	CH_3	Cl	CH_2	
2.0161	H	H	$CH_2N(CH_3)SO_2CH_3$	CH_3	H	CH_2	
2.0162	H	H	CH_2OCH_2Ph	CH_3	F	CH_2	
2.0163	H	H	CH_2OCH_2Ph	CH_3	Cl	CH_2	
2.0164	H	H	CH_2OCH_2Ph	CH_3	H	CH_2	
2.0165	H	H	$CH_2OCH_2CH_2OH$	CH_3	F	CH_2	
2.0166	H	H	$CH_2OCH_2CH_2OH$	CH_3	Cl	CH_2	
2.0167	H	H	$CH_2OCH_2CH_2OH$	CH_3	H	CH_2	
2.0168	H	H	$CH_2OCH_2CH_2Cl$	CH_3	F	CH_2	
2.0169	H	H	$CH_2OCH_2CH_2$ Cl	CH_3	Cl	CH_2	
2.0170	H	H	$CH_2OCH_2CH_2$ Cl	CH_3	H	CH_2	
2.0171	H	H	$CH_2OCH_2CF_3$	CH_3	F	CH_2	
2.0172	H	H	$CH_2OCH_2CF_3$	CH_3	Cl	CH_2	
2.0173	H	H	$CH_2OCH_2CF_3$	CH_3	H	CH_2	
2.0174	H	H	$CH_2OCH_2CH=CH_2$	CH_3	F	CH_2	
2.0175	H	H	$CH_2OCH_2CH=CH_2$	CH_3	Cl	CH_2	
2.0176	H	H	$CH_2OCH_2CH=CH_2$	CH_3	H	CH_2	
2.0177	H	H	$CH_2O(CO)CH_3$	CH_3	F	CH_2	
2.0178	H	H	$CH_2O(CO)CH_3$	CH_3	Cl	CH_2	
2.0179	H	H	$CH_2O(CO)CH_3$	CH_3	H	CH_2	
2.0180	H	H	$CH_2OCH_2C{\equiv}CH$	CH_3	F	CH_2	
2.0181	H	H	$CH_2OCH_2C{\equiv}CH$	CH_3	Cl	CH_2	
2.0182	H	H	$CH_2OCH_2C{\equiv}CH$	CH_3	H	CH_2	
2.0183	H	H	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	F	CH_2	
2.0184	H	H	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	Cl	CH_2	
2.0185	H	H	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	H	CH_2	

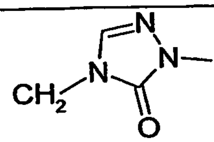
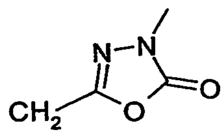
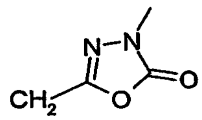
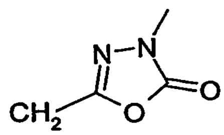
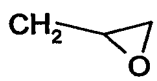
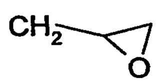
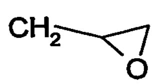
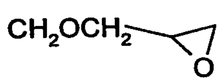
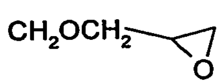
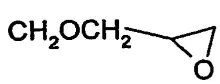
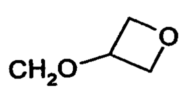
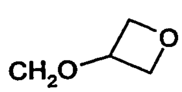
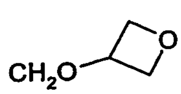
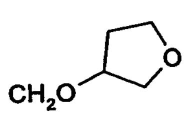
No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0186	H	H		CH_3	F	CH_2	
2.0187	H	H		CH_3	Cl	CH_2	
2.0188	H	H		CH_3	H	CH_2	
2.0189	H	H		CH_3	F	CH_2	
2.0190	H	H		CH_3	Cl	CH_2	
2.0191	H	H		CH_3	H	CH_2	
2.0192	H	H		CH_3	F	CH_2	
2.0193	H	H		CH_3	Cl	CH_2	
2.0194	H	H		CH_3	H	CH_2	
2.0195	H	H		CH_3	F	CH_2	
2.0196	H	H		CH_3	Cl	CH_2	
2.0197	H	H		CH_3	H	CH_2	
2.0198	H	H		CH_3	F	CH_2	

No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0199	H	H		CH_3	Cl	CH_2	
2.0200	H	H		CH_3	H	CH_2	
2.0201	H	H		CH_3	F	CH_2	
2.0202	H	H		CH_3	Cl	CH_2	
2.0203	H	H		CH_3	H	CH_2	
2.0204	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	F	CH_2	
2.0205	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	Cl	CH_2	
2.0206	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	H	CH_2	
2.0207	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	F	CH_2	
2.0208	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	Cl	CH_2	
2.0209	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	H	CH_2	
2.0210	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	F	CH_2	
2.0211	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	Cl	CH_2	
2.0212	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	H	CH_2	
2.0213	CH_3	CH_3	CH_2OCH_2Ph	CH_3	F	CH_2	
2.0214	CH_3	CH_3	CH_2OCH_2Ph	CH_3	Cl	CH_2	
2.0215	CH_3	CH_3	CH_2OCH_2Ph	CH_3	H	CH_2	
2.0216	CH_3	CH_3	$CH_2OCH_2CH_2OH$	CH_3	F	CH_2	
2.0217	CH_3	CH_3	$CH_2OCH_2CH_2OH$	CH_3	Cl	CH_2	
2.0218	CH_3	CH_3	$CH_2OCH_2CH_2OH$	CH_3	H	CH_2	
2.0219	CH_3	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	F	CH_2	
2.0220	CH_3	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	Cl	CH_2	
2.0221	CH_3	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	H	CH_2	
2.0222	CH_3	CH_3	$CH_2OCH_2CF_3$	CH_3	F	CH_2	
2.0223	CH_3	CH_3	$CH_2OCH_2CF_3$	CH_3	Cl	CH_2	
2.0224	CH_3	CH_3	$CH_2OCH_2CF_3$	CH_3	H	CH_2	

No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0225	CH_3	CH_3	$CH_2OCH_2CH=CH_2$	CH_3	F	CH_2	
2.0226	CH_3	CH_3	$CH_2OCH_2CH=CH_2$	CH_3	Cl	CH_2	
2.0227	CH_3	CH_3	$CH_2OCH_2CH=CH_2$	CH_3	H	CH_2	
2.0228	CH_3	CH_3	$CH_2O(CO)CH_3$	CH_3	F	CH_2	
2.0229	CH_3	CH_3	$CH_2O(CO)CH_3$	CH_3	Cl	CH_2	
2.0230	CH_3	CH_3	$CH_2O(CO)CH_3$	CH_3	H	CH_2	
2.0231	CH_3	CH_3	$CH_2OCH_2C\equiv CH$	CH_3	F	CH_2	
2.0232	CH_3	CH_3	$CH_2OCH_2C\equiv CH$	CH_3	Cl	CH_2	
2.0233	CH_3	CH_3	$CH_2OCH_2C\equiv CH$	CH_3	H	CH_2	
2.0234	CH_3	CH_3	$CH_2OCH_2C\equiv CCH_3$	CH_3	F	CH_2	
2.0235	CH_3	CH_3	$CH_2OCH_2C\equiv CCH_3$	CH_3	Cl	CH_2	
2.0236	CH_3	CH_3	$CH_2OCH_2C\equiv CCH_3$	CH_3	H	CH_2	
2.0237	CH_3	CH_3		CH_3	F	CH_2	
2.0238	CH_3	CH_3		CH_3	Cl	CH_2	
2.0239	CH_3	CH_3		CH_3	H	CH_2	
2.0240	CH_3	CH_3		CH_3	F	CH_2	
2.0241	CH_3	CH_3		CH_3	Cl	CH_2	
2.0242	CH_3	CH_3		CH_3	H	CH_2	
2.0243	CH_3	CH_3		CH_3	F	CH_2	

No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0244	CH_3	CH_3		CH_3	Cl	CH_2	
2.0245	CH_3	CH_3		CH_3	H	CH_2	
2.0246	CH_3	CH_3		CH_3	F	CH_2	
2.0247	CH_3	CH_3		CH_3	Cl	CH_2	
2.0248	CH_3	CH_3		CH_3	H	CH_2	
2.0249	CH_3	CH_3		CH_3	F	CH_2	
2.0250	CH_3	CH_3		CH_3	Cl	CH_2	
2.0251	CH_3	CH_3		CH_3	H	CH_2	
2.0252	CH_3	CH_3		CH_3	F	CH_2	
2.0253	CH_3	CH_3		CH_3	Cl	CH_2	
2.0254	CH_3	CH_3		CH_3	H	CH_2	
2.0255	H	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	F	CH_2	
2.0256	H	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	Cl	CH_2	
2.0257	H	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	H	CH_2	
2.0258	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	F	CH_2	
2.0259	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	Cl	CH_2	
2.0260	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	H	CH_2	
2.0261	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	F	CH_2	
2.0262	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	Cl	CH_2	
2.0263	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	H	CH_2	

No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0264	H	CH_3	CH_2OCH_2Ph	CH_3	F	CH_2	
2.0265	H	CH_3	CH_2OCH_2Ph	CH_3	Cl	CH_2	
2.0266	H	CH_3	CH_2OCH_2Ph	CH_3	H	CH_2	
2.0267	H	CH_3	$CH_2OCH_2CH_2OH$	CH_3	F	CH_2	
2.0268	H	CH_3	$CH_2OCH_2CH_2OH$	CH_3	Cl	CH_2	
2.0269	H	CH_3	$CH_2OCH_2CH_2OH$	CH_3	H	CH_2	
2.0270	H	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	F	CH_2	
2.0271	H	CH_3	$CH_2OCH_2CH_2$ Cl	CH_3	Cl	CH_2	
2.0272	H	CH_3	$CH_2OCH_2CH_2$ Cl	CH_3	H	CH_2	
2.0273	H	CH_3	$CH_2OCH_2CF_3$	CH_3	F	CH_2	
2.0274	H	CH_3	$CH_2OCH_2CF_3$	CH_3	Cl	CH_2	
2.0275	H	CH_3	$CH_2OCH_2CF_3$	CH_3	H	CH_2	
2.0276	H	CH_3	$CH_2OCH_2CH{=}CH_2$	CH_3	F	CH_2	
2.0277	H	CH_3	$CH_2OCH_2CH{=}CH_2$	CH_3	Cl	CH_2	
2.0278	H	CH_3	$CH_2OCH_2CH{=}CH_2$	CH_3	H	CH_2	
2.0279	H	CH_3	$CH_2O(CO)CH_3$	CH_3	F	CH_2	
2.0280	H	CH_3	$CH_2O(CO)CH_3$	CH_3	Cl	CH_2	
2.0281	H	CH_3	$CH_2O(CO)CH_3$	CH_3	H	CH_2	
2.0282	H	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	F	CH_2	
2.0283	H	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	Cl	CH_2	
2.0284	H	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	H	CH_2	
2.0285	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	F	CH_2	
2.0286	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	Cl	CH_2	
2.0287	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	H	CH_2	
2.0288	H	CH_3		CH_3	F	CH_2	
2.0289	H	CH_3		CH_3	Cl	CH_2	

No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0290	H	CH_3		CH_3	H	CH_2	
2.0291	H	CH_3		CH_3	F	CH_2	
2.0292	H	CH_3		CH_3	Cl	CH_2	
2.0293	H	CH_3		CH_3	H	CH_2	
2.0294	H	CH_3		CH_3	F	CH_2	
2.0295	H	CH_3		CH_3	Cl	CH_2	
2.0296	H	CH_3		CH_3	H	CH_2	
2.0297	H	CH_3		CH_3	F	CH_2	
2.0298	H	CH_3		CH_3	Cl	CH_2	
2.0299	H	CH_3		CH_3	H	CH_2	
2.0300	H	CH_3		CH_3	F	CH_2	
2.0301	H	CH_3		CH_3	Cl	CH_2	
2.0302	H	CH_3		CH_3	H	CH_2	
2.0303	H	CH_3		CH_3	F	CH_2	

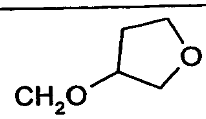
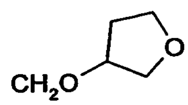
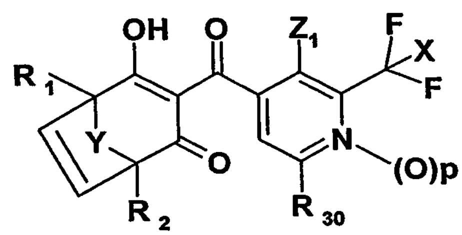
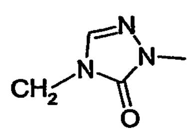
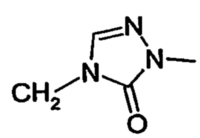
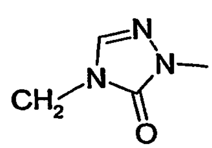
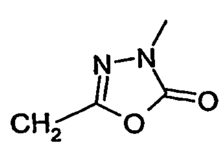
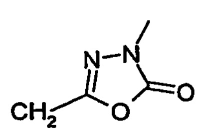
No.	R_1	R_2	Z_1	R_{30}	X	Y	Physical data
2.0304	H	CH_3		CH_3	Cl	CH_2	
2.0305	H	CH_3		CH_3	H	CH_2	

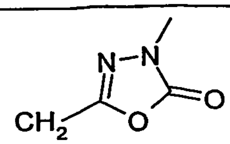
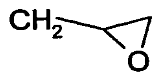
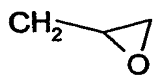
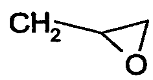
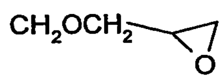
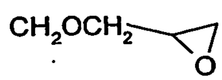
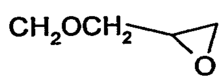
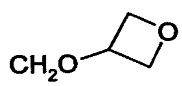
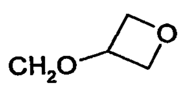
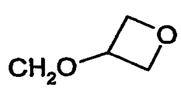
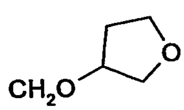
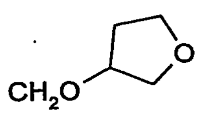
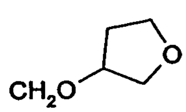
Table 3: Compounds of formula Id:

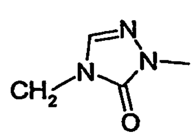


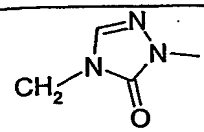
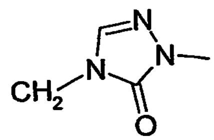
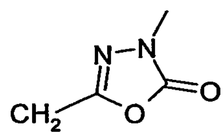
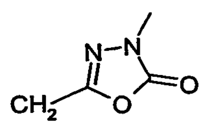
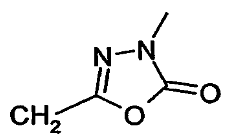
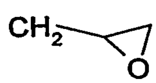
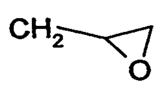
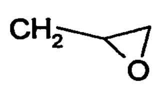
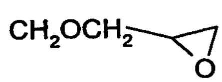
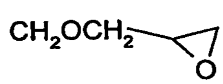
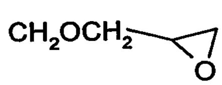
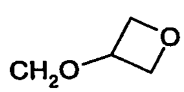
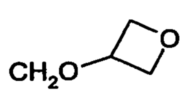
(Id)

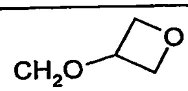
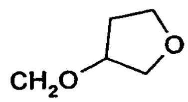
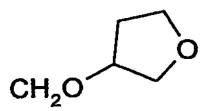
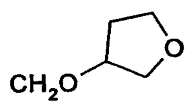
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0000	H	H	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	0	
3.0001	H	H	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2	0	
3.0002	H	H	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	0	
3.0003	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	0	
3.0004	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2	0	
3.0005	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	0	
3.0006	H	H	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2	0	
3.0007	H	H	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2	0	
3.0008	H	H	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2	0	
3.0009	H	H	CH_2OCH_2Ph	H	F	CH_2	0	
3.0010	H	H	CH_2OCH_2Ph	H	Cl	CH_2	0	
3.0011	H	H	CH_2OCH_2Ph	H	H	CH_2	0	
3.0012	H	H	$CH_2OCH_2CH_2OH$	H	F	CH_2	0	
3.0013	H	H	$CH_2OCH_2CH_2OH$	H	Cl	CH_2	0	
3.0014	H	H	$CH_2OCH_2CH_2OH$	H	H	CH_2	0	
3.0015	H	H	$CH_2OCH_2CH_2Cl$	H	F	CH_2	0	
3.0016	H	H	$CH_2OCH_2CH_2$ Cl	H	Cl	CH_2	0	

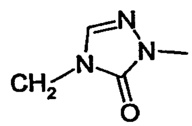
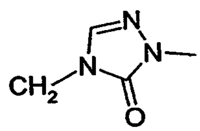
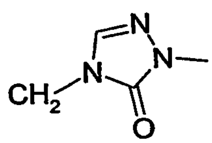
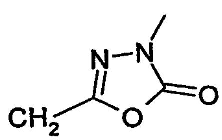
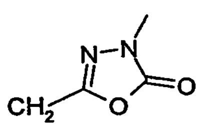
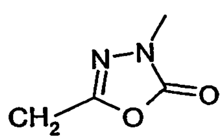
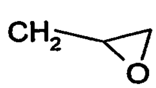
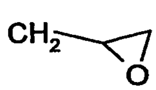
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0017	H	H	$CH_2OCH_2CH_2Cl$	H	H	CH_2	0	
3.0018	H	H	$CH_2OCH_2CF_3$	H	F	CH_2	0	
3.0019	H	H	$CH_2OCH_2CF_3$	H	Cl	CH_2	0	
3.0020	H	H	$CH_2OCH_2CF_3$	H	H	CH_2	0	
3.0021	H	H	$CH_2OCH_2CH{=}CH_2$	H	F	CH_2	0	
3.0022	H	H	$CH_2OCH_2CH{=}CH_2$	H	Cl	CH_2	0	
3.0023	H	H	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2	0	
3.0024	H	H	$CH_2O(CO)CH_3$	H	F	CH_2	0	
3.0025	H	H	$CH_2O(CO)CH_3$	H	Cl	CH_2	0	
3.0026	H	H	$CH_2O(CO)CH_3$	H	H	CH_2	0	
3.0027	H	H	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2	0	
3.0028	H	H	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2	0	
3.0029	H	H	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2	0	
3.0030	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2	0	
3.0031	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2	0	
3.0032	H	H	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2	0	
3.0033	H	H		H	F	CH_2	0	
3.0034	H	H		H	Cl	CH_2	0	
3.0035	H	H		H	H	CH_2	0	
3.0036	H	H		H	F	CH_2	0	
3.0037	H	H		H	Cl	CH_2	0	

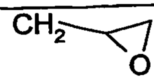
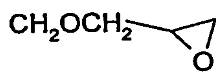
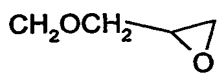
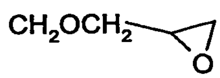
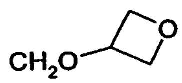
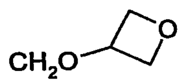
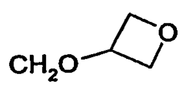
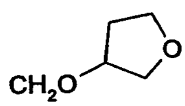
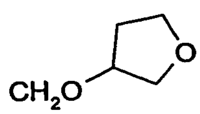
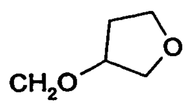
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0038	H	H		H	H	CH_2	0	
3.0039	H	H		H	F	CH_2	0	
3.0040	H	H		H	Cl	CH_2	0	
3.0041	H	H		H	H	CH_2	0	
3.0042	H	H		H	F	CH_2	0	
3.0043	H	H		H	Cl	CH_2	0	
3.0044	H	H		H	H	CH_2	0	
3.0045	H	H		H	F	CH_2	0	
3.0046	H	H		H	Cl	CH_2	0	
3.0047	H	H		H	H	CH_2	0	
3.0048	H	H		H	F	CH_2	0	
3.0049	H	H		H	Cl	CH_2	0	
3.0050	H	H		H	H	CH_2	0	
3.0051	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	0	
3.0052	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2	0	
3.0053	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	0	
3.0054	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	0	

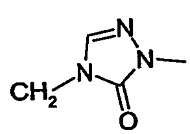
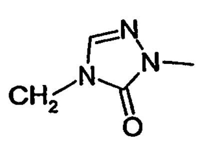
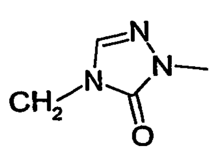
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0055	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2	0	
3.0056	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	0	
3.0057	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2	0	
3.0058	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2	0	
3.0059	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2	0	
3.0060	CH_3	CH_3	CH_2OCH_2Ph	H	F	CH_2	0	
3.0061	CH_3	CH_3	CH_2OCH_2Ph	H	Cl	CH_2	0	
3.0062	CH_3	CH_3	CH_2OCH_2Ph	H	H	CH_2	0	
3.0063	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	F	CH_2	0	
3.0064	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	CH_2	0	
3.0065	CH_3	CH_3	$CH_2OCH_2CH_2OH$	H	H	CH_2	0	
3.0066	CH_3	CH_3	$CH_2OCH_2CH_2Cl$	H	F	CH_2	0	
3.0067	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	Cl	CH_2	0	
3.0068	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	H	H	CH_2	0	
3.0069	CH_3	CH_3	$CH_2OCH_2CF_3$	H	F	CH_2	0	
3.0070	CH_3	CH_3	$CH_2OCH_2CF_3$	H	Cl	CH_2	0	
3.0071	CH_3	CH_3	$CH_2OCH_2CF_3$	H	H	CH_2	0	
3.0072	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	F	CH_2	0	
3.0073	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	Cl	CH_2	0	
3.0074	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2	0	
3.0075	CH_3	CH_3	$CH_2O(CO)CH_3$	H	F	CH_2	0	
3.0076	CH_3	CH_3	$CH_2O(CO)CH_3$	H	Cl	CH_2	0	
3.0077	CH_3	CH_3	$CH_2O(CO)CH_3$	H	H	CH_2	0	
3.0078	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2	0	
3.0079	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2	0	
3.0080	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2	0	
3.0081	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2	0	
3.0082	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2	0	
3.0083	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2	0	
3.0084	CH_3	CH_3		H	F	CH_2	0	

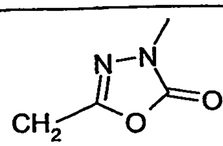
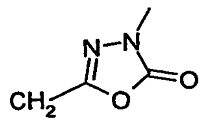
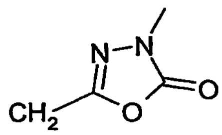
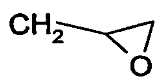
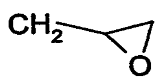
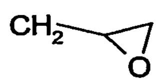
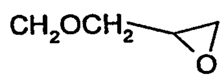
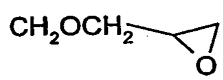
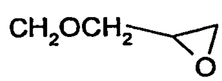
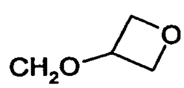
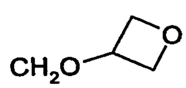
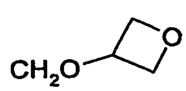
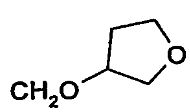
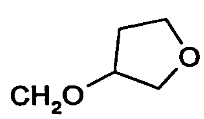
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0085	CH_3	CH_3		H	Cl	CH_2	0	
3.0086	CH_3	CH_3		H	H	CH_2	0	
3.0087	CH_3	CH_3		H	F	CH_2	0	
3.0088	CH_3	CH_3		H	Cl	CH_2	0	
3.0089	CH_3	CH_3		H	H	CH_2	0	
3.0090	CH_3	CH_3		H	F	CH_2	0	
3.0091	CH_3	CH_3		H	Cl	CH_2	0	
3.0092	CH_3	CH_3		H	H	CH_2	0	
3.0093	CH_3	CH_3		H	F	CH_2	0	
3.0094	CH_3	CH_3		H	Cl	CH_2	0	
3.0095	CH_3	CH_3		H	H	CH_2	0	
3.0096	CH_3	CH_3		H	F	CH_2	0	
3.0097	CH_3	CH_3		H	Cl	CH_2	0	

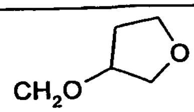
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0098	CH_3	CH_3		H	H	CH_2	0	
3.0099	CH_3	CH_3		H	F	CH_2	0	
3.0100	CH_3	CH_3		H	Cl	CH_2	0	
3.0101	CH_3	CH_3		H	H	CH_2	0	
3.0102	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	F	CH_2	0	
3.0103	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	Cl	CH_2	0	
3.0104	H	CH_3	$CH_2OCH_2CH_2OCH_3$	H	H	CH_2	0	
3.0105	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	F	CH_2	0	
3.0106	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	Cl	CH_2	0	
3.0107	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	H	H	CH_2	0	
3.0108	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	F	CH_2	0	
3.0109	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	Cl	CH_2	0	
3.0110	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	H	H	CH_2	0	
3.0111	H	CH_3	CH_2OCH_2Ph	H	F	CH_2	0	
3.0112	H	CH_3	CH_2OCH_2Ph	H	Cl	CH_2	0	
3.0113	H	CH_3	CH_2OCH_2Ph	H	H	CH_2	0	
3.0114	H	CH_3	$CH_2OCH_2CH_2OH$	H	F	CH_2	0	
3.0115	H	CH_3	$CH_2OCH_2CH_2OH$	H	Cl	CH_2	0	
3.0116	H	CH_3	$CH_2OCH_2CH_2OH$	H	H	CH_2	0	
3.0117	H	CH_3	$CH_2OCH_2CH_2Cl$	H	F	CH_2	0	
3.0118	H	CH_3	$CH_2OCH_2CH_2Cl$	H	Cl	CH_2	0	
3.0119	H	CH_3	$CH_2OCH_2CH_2Cl$	H	H	CH_2	0	
3.0120	H	CH_3	$CH_2OCH_2CF_3$	H	F	CH_2	0	
3.0121	H	CH_3	$CH_2OCH_2CF_3$	H	Cl	CH_2	0	
3.0122	H	CH_3	$CH_2OCH_2CF_3$	H	H	CH_2	0	
3.0123	H	CH_3	$CH_2OCH_2CH=CH_2$	H	F	CH_2	0	
3.0124	H	CH_3	$CH_2OCH_2CH=CH_2$	H	Cl	CH_2	0	

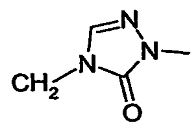
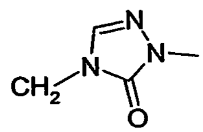
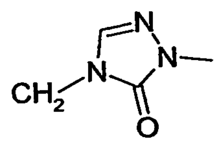
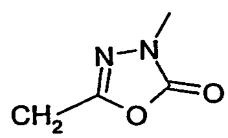
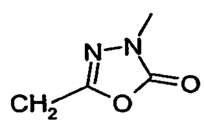
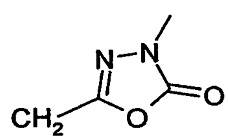
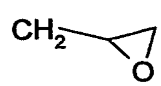
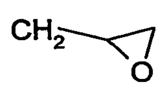
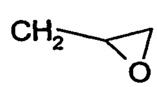
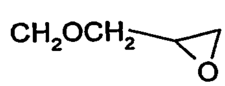
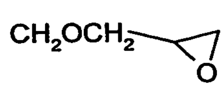
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0125	H	CH_3	$CH_2OCH_2CH{=}CH_2$	H	H	CH_2	0	
3.0126	H	CH_3	$CH_2O(CO)CH_3$	H	F	CH_2	0	
3.0127	H	CH_3	$CH_2O(CO)CH_3$	H	Cl	CH_2	0	
3.0128	H	CH_3	$CH_2O(CO)CH_3$	H	H	CH_2	0	
3.0129	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	F	CH_2	0	
3.0130	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	Cl	CH_2	0	
3.0131	H	CH_3	$CH_2OCH_2C{\equiv}CH$	H	H	CH_2	0	
3.0132	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	F	CH_2	0	
3.0133	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	Cl	CH_2	0	
3.0134	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	H	H	CH_2	0	
3.0135	H	CH_3		H	F	CH_2	0	
3.0136	H	CH_3		H	Cl	CH_2	0	
3.0137	H	CH_3		H	H	CH_2	0	
3.0138	H	CH_3		H	F	CH_2	0	
3.0139	H	CH_3		H	Cl	CH_2	0	
3.0140	H	CH_3		H	H	CH_2	0	
3.0141	H	CH_3		H	F	CH_2	0	
3.0142	H	CH_3		H	Cl	CH_2	0	

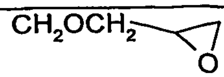
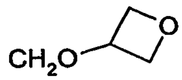
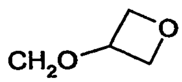
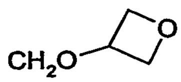
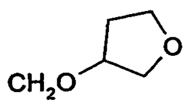
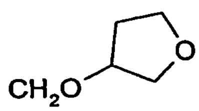
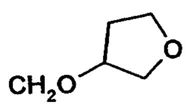
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0143	H	CH_3		H	H	CH_2	0	
3.0144	H	CH_3		H	F	CH_2	0	
3.0145	H	CH_3		H	Cl	CH_2	0	
3.0146	H	CH_3		H	H	CH_2	0	
3.0147	H	CH_3		H	F	CH_2	0	
3.0148	H	CH_3		H	Cl	CH_2	0	
3.0149	H	CH_3		H	H	CH_2	0	
3.0150	H	CH_3		H	F	CH_2	0	
3.0151	H	CH_3		H	Cl	CH_2	0	
3.0152	H	CH_3		H	H	CH_2	0	
3.0153	H	H	$CH_2OCH_2CH_2OCH_3$	CH_3	F	CH_2	0	
3.0154	H	H	$CH_2OCH_2CH_2OCH_3$	CH_3	Cl	CH_2	0	
3.0155	H	H	$CH_2OCH_2CH_2OCH_3$	CH_3	H	CH_2	0	
3.0156	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	F	CH_2	0	
3.0157	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	Cl	CH_2	0	
3.0158	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	H	CH_2	0	
3.0159	H	H	$CH_2N(CH_3)SO_2CH_3$	CH_3	F	CH_2	0	
3.0160	H	H	$CH_2N(CH_3)SO_2CH_3$	CH_3	Cl	CH_2	0	
3.0161	H	H	$CH_2N(CH_3)SO_2CH_3$	CH_3	H	CH_2	0	
3.0162	H	H	CH_2OCH_2Ph	CH_3	F	CH_2	0	
3.0163	H	H	CH_2OCH_2Ph	CH_3	Cl	CH_2	0	

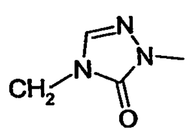
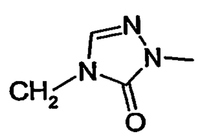
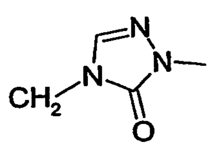
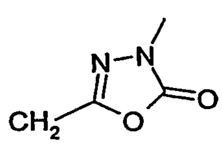
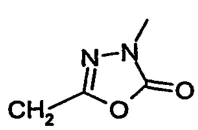
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0164	H	H	CH_2OCH_2Ph	CH_3	H	CH_2	0	
3.0165	H	H	$CH_2OCH_2CH_2OH$	CH_3	F	CH_2	0	
3.0166	H	H	$CH_2OCH_2CH_2OH$	CH_3	Cl	CH_2	0	
3.0167	H	H	$CH_2OCH_2CH_2OH$	CH_3	H	CH_2	0	
3.0168	H	H	$CH_2OCH_2CH_2Cl$	CH_3	F	CH_2	0	
3.0169	H	H	$CH_2OCH_2CH_2Cl$	CH_3	Cl	CH_2	0	
3.0170	H	H	$CH_2OCH_2CH_2Cl$	CH_3	H	CH_2	0	
3.0171	H	H	$CH_2OCH_2CF_3$	CH_3	F	CH_2	0	
3.0172	H	H	$CH_2OCH_2CF_3$	CH_3	Cl	CH_2	0	
3.0173	H	H	$CH_2OCH_2CF_3$	CH_3	H	CH_2	0	
3.0174	H	H	$CH_2OCH_2CH{=}CH_2$	CH_3	F	CH_2	0	
3.0175	H	H	$CH_2OCH_2CH{=}CH_2$	CH_3	Cl	CH_2	0	
3.0176	H	H	$CH_2OCH_2CH{=}CH_2$	CH_3	H	CH_2	0	
3.0177	H	H	$CH_2O(CO)CH_3$	CH_3	F	CH_2	0	
3.0178	H	H	$CH_2O(CO)CH_3$	CH_3	Cl	CH_2	0	
3.0179	H	H	$CH_2O(CO)CH_3$	CH_3	H	CH_2	0	
3.0180	H	H	$CH_2OCH_2C{\equiv}CH$	CH_3	F	CH_2	0	
3.0181	H	H	$CH_2OCH_2C{\equiv}CH$	CH_3	Cl	CH_2	0	
3.0182	H	H	$CH_2OCH_2C{\equiv}CH$	CH_3	H	CH_2	0	
3.0183	H	H	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	F	CH_2	0	
3.0184	H	H	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	Cl	CH_2	0	
3.0185	H	H	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	H	CH_2	0	
3.0186	H	H		CH_3	F	CH_2	0	
3.0187	H	H		CH_3	Cl	CH_2	0	
3.0188	H	H		CH_3	H	CH_2	0	

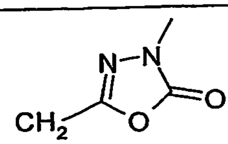
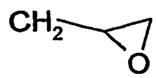
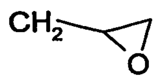
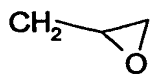
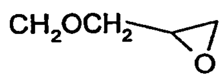
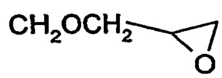
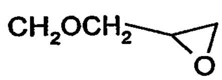
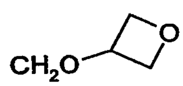
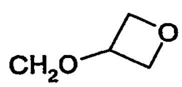
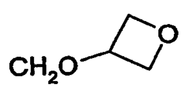
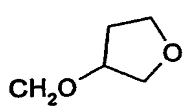
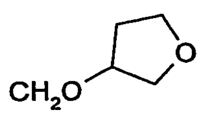
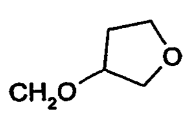
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0189	H	H		CH_3	F	CH_2	0	
3.0190	H	H		CH_3	Cl	CH_2	0	
3.0191	H	H		CH_3	H	CH_2	0	
3.0192	H	H		CH_3	F	CH_2	0	
3.0193	H	H		CH_3	Cl	CH_2	0	
3.0194	H	H		CH_3	H	CH_2	0	
3.0195	H	H		CH_3	F	CH_2	0	
3.0196	H	H		CH_3	Cl	CH_2	0	
3.0197	H	H		CH_3	H	CH_2	0	
3.0198	H	H		CH_3	F	CH_2	0	
3.0199	H	H		CH_3	Cl	CH_2	0	
3.0200	H	H		CH_3	H	CH_2	0	
3.0201	H	H		CH_3	F	CH_2	0	
3.0202	H	H		CH_3	Cl	CH_2	0	

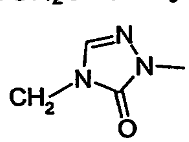
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0203	H	H		CH_3	H	CH_2	0	
3.0204	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	F	CH_2	0	
3.0205	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	Cl	CH_2	0	
3.0206	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	H	CH_2	0	
3.0207	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	F	CH_2	0	
3.0208	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	Cl	CH_2	0	
3.0209	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	H	CH_2	0	
3.0210	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	F	CH_2	0	
3.0211	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	Cl	CH_2	0	
3.0212	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	H	CH_2	0	
3.0213	CH_3	CH_3	CH_2OCH_2Ph	CH_3	F	CH_2	0	
3.0214	CH_3	CH_3	CH_2OCH_2Ph	CH_3	Cl	CH_2	0	
3.0215	CH_3	CH_3	CH_2OCH_2Ph	CH_3	H	CH_2	0	
3.0216	CH_3	CH_3	$CH_2OCH_2CH_2OH$	CH_3	F	CH_2	0	
3.0217	CH_3	CH_3	$CH_2OCH_2CH_2OH$	CH_3	Cl	CH_2	0	
3.0218	CH_3	CH_3	$CH_2OCH_2CH_2OH$	CH_3	H	CH_2	0	
3.0219	CH_3	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	F	CH_2	0	
3.0220	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	CH_3	Cl	CH_2	0	
3.0221	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	CH_3	H	CH_2	0	
3.0222	CH_3	CH_3	$CH_2OCH_2CF_3$	CH_3	F	CH_2	0	
3.0223	CH_3	CH_3	$CH_2OCH_2CF_3$	CH_3	Cl	CH_2	0	
3.0224	CH_3	CH_3	$CH_2OCH_2CF_3$	CH_3	H	CH_2	0	
3.0225	CH_3	CH_3	$CH_2OCH_2CH=CH_2$	CH_3	F	CH_2	0	
3.0226	CH_3	CH_3	$CH_2OCH_2CH=CH_2$	CH_3	Cl	CH_2	0	
3.0227	CH_3	CH_3	$CH_2OCH_2CH=CH_2$	CH_3	H	CH_2	0	
3.0228	CH_3	CH_3	$CH_2O(CO)CH_3$	CH_3	F	CH_2	0	
3.0229	CH_3	CH_3	$CH_2O(CO)CH_3$	CH_3	Cl	CH_2	0	
3.0230	CH_3	CH_3	$CH_2O(CO)CH_3$	CH_3	H	CH_2	0	
3.0231	CH_3	CH_3	$CH_2OCH_2C\equiv CH$	CH_3	F	CH_2	0	
3.0232	CH_3	CH_3	$CH_2OCH_2C\equiv CH$	CH_3	Cl	CH_2	0	
3.0233	CH_3	CH_3	$CH_2OCH_2C\equiv CH$	CH_3	H	CH_2	0	

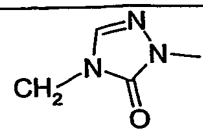
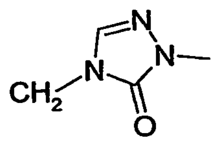
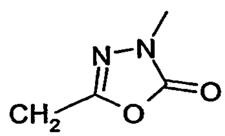
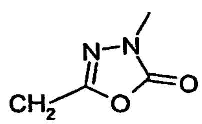
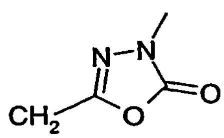
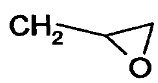
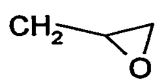
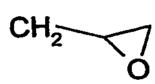
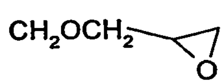
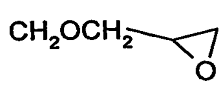
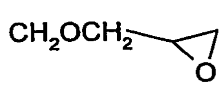
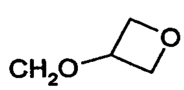
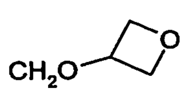
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0234	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	F	CH_2	0	
3.0235	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	Cl	CH_2	0	
3.0236	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	H	CH_2	0	
3.0237	CH_3	CH_3		CH_3	F	CH_2	0	
3.0238	CH_3	CH_3		CH_3	Cl	CH_2	0	
3.0239	CH_3	CH_3		CH_3	H	CH_2	0	
3.0240	CH_3	CH_3		CH_3	F	CH_2	0	
3.0241	CH_3	CH_3		CH_3	Cl	CH_2	0	
3.0242	CH_3	CH_3		CH_3	H	CH_2	0	
3.0243	CH_3	CH_3		CH_3	F	CH_2	0	
3.0244	CH_3	CH_3		CH_3	Cl	CH_2	0	
3.0245	CH_3	CH_3		CH_3	H	CH_2	0	
3.0246	CH_3	CH_3		CH_3	F	CH_2	0	
3.0247	CH_3	CH_3		CH_3	Cl	CH_2	0	

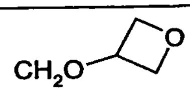
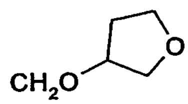
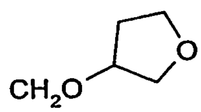
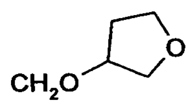
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0248	CH_3	CH_3		CH_3	H	CH_2	0	
3.0249	CH_3	CH_3		CH_3	F	CH_2	0	
3.0250	CH_3	CH_3		CH_3	Cl	CH_2	0	
3.0251	CH_3	CH_3		CH_3	H	CH_2	0	
3.0252	CH_3	CH_3		CH_3	F	CH_2	0	
3.0253	CH_3	CH_3		CH_3	Cl	CH_2	0	
3.0254	CH_3	CH_3		CH_3	H	CH_2	0	
3.0255	H	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	F	CH_2	0	
3.0256	H	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	Cl	CH_2	0	
3.0257	H	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	H	CH_2	0	
3.0258	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	F	CH_2	0	
3.0259	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	Cl	CH_2	0	
3.0260	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	H	CH_2	0	
3.0261	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	F	CH_2	0	
3.0262	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	Cl	CH_2	0	
3.0263	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	H	CH_2	0	
3.0264	H	CH_3	CH_2OCH_2Ph	CH_3	F	CH_2	0	
3.0265	H	CH_3	CH_2OCH_2Ph	CH_3	Cl	CH_2	0	
3.0266	H	CH_3	CH_2OCH_2Ph	CH_3	H	CH_2	0	
3.0267	H	CH_3	$CH_2OCH_2CH_2OH$	CH_3	F	CH_2	0	
3.0268	H	CH_3	$CH_2OCH_2CH_2OH$	CH_3	Cl	CH_2	0	
3.0269	H	CH_3	$CH_2OCH_2CH_2OH$	CH_3	H	CH_2	0	
3.0270	H	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	F	CH_2	0	
3.0271	H	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	Cl	CH_2	0	

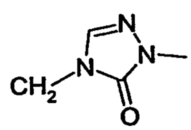
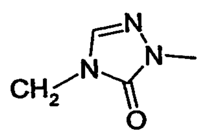
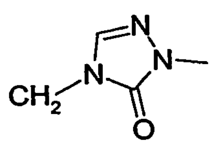
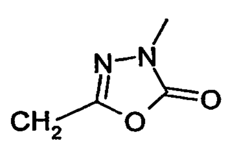
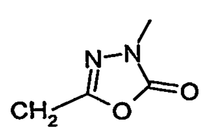
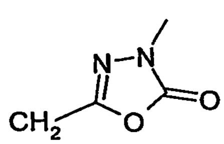
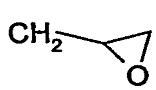
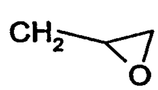
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0272	H	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	H	CH_2	0	
3.0273	H	CH_3	$CH_2OCH_2CF_3$	CH_3	F	CH_2	0	
3.0274	H	CH_3	$CH_2OCH_2CF_3$	CH_3	Cl	CH_2	0	
3.0275	H	CH_3	$CH_2OCH_2CF_3$	CH_3	H	CH_2	0	
3.0276	H	CH_3	$CH_2OCH_2CH{=}CH_2$	CH_3	F	CH_2	0	
3.0277	H	CH_3	$CH_2OCH_2CH{=}CH_2$	CH_3	Cl	CH_2	0	
3.0278	H	CH_3	$CH_2OCH_2CH{=}CH_2$	CH_3	H	CH_2	0	
3.0279	H	CH_3	$CH_2O(CO)CH_3$	CH_3	F	CH_2	0	
3.0280	H	CH_3	$CH_2O(CO)CH_3$	CH_3	Cl	CH_2	0	
3.0281	H	CH_3	$CH_2O(CO)CH_3$	CH_3	H	CH_2	0	
3.0282	H	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	F	CH_2	0	
3.0283	H	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	Cl	CH_2	0	
3.0284	H	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	H	CH_2	0	
3.0285	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	F	CH_2	0	
3.0286	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	Cl	CH_2	0	
3.0287	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	H	CH_2	0	
3.0288	H	CH_3		CH_3	F	CH_2	0	
3.0289	H	CH_3		CH_3	Cl	CH_2	0	
3.0290	H	CH_3		CH_3	H	CH_2	0	
3.0291	H	CH_3		CH_3	F	CH_2	0	
3.0292	H	CH_3		CH_3	Cl	CH_2	0	

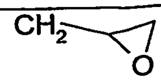
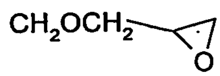
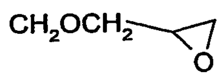
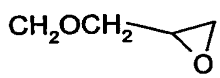
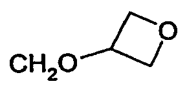
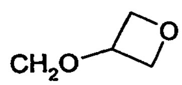
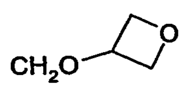
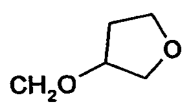
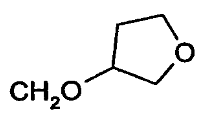
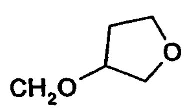
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0293	H	CH_3		CH_3	H	CH_2	0	
3.0294	H	CH_3		CH_3	F	CH_2	0	
3.0295	H	CH_3		CH_3	Cl	CH_2	0	
3.0296	H	CH_3		CH_3	H	CH_2	0	
3.0297	H	CH_3		CH_3	F	CH_2	0	
3.0298	H	CH_3		CH_3	Cl	CH_2	0	
3.0299	H	CH_3		CH_3	H	CH_2	0	
3.0300	H	CH_3		CH_3	F	CH_2	0	
3.0301	H	CH_3		CH_3	Cl	CH_2	0	
3.0302	H	CH_3		CH_3	H	CH_2	0	
3.0303	H	CH_3		CH_3	F	CH_2	0	
3.0304	H	CH_3		CH_3	Cl	CH_2	0	
3.0305	H	CH_3		CH_3	H	CH_2	0	
3.0306	H	H	$CH_2OCH_2CH_2OCH_3$	CH_3	F	CH_2	1	
3.0307	H	H	$CH_2OCH_2CH_2OCH_3$	CH_3	Cl	CH_2	1	
3.0308	H	H	$CH_2OCH_2CH_2OCH_3$	CH_3	H	CH_2	1	
3.0309	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	F	CH_2	1	

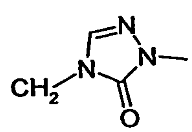
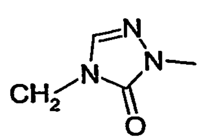
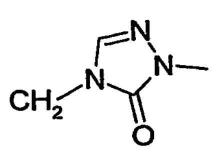
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0310	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	Cl	CH_2	1	
3.0311	H	H	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	H	CH_2	1	
3.0312	H	H	$CH_2N(CH_3)SO_2CH_3$	CH_3	F	CH_2	1	
3.0313	H	H	$CH_2N(CH_3)SO_2CH_3$	CH_3	Cl	CH_2	1	
3.0314	H	H	$CH_2N(CH_3)SO_2CH_3$	CH_3	H	CH_2	1	
3.0315	H	H	CH_2OCH_2Ph	CH_3	F	CH_2	1	
3.0316	H	H	CH_2OCH_2Ph	CH_3	Cl	CH_2	1	
3.0317	H	H	CH_2OCH_2Ph	CH_3	H	CH_2	1	
3.0318	H	H	$CH_2OCH_2CH_2OH$	CH_3	F	CH_2	1	
3.0319	H	H	$CH_2OCH_2CH_2OH$	CH_3	Cl	CH_2	1	
3.0320	H	H	$CH_2OCH_2CH_2OH$	CH_3	H	CH_2	1	
3.0321	H	H	$CH_2OCH_2CH_2Cl$	CH_3	F	CH_2	1	
3.0322	H	H	$CH_2OCH_2CH_2$ Cl	CH_3	Cl	CH_2	1	
3.0323	H	H	$CH_2OCH_2CH_2$ Cl	CH_3	H	CH_2	1	
3.0324	H	H	$CH_2OCH_2CF_3$	CH_3	F	CH_2	1	
3.0325	H	H	$CH_2OCH_2CF_3$	CH_3	Cl	CH_2	1	
3.0326	H	H	$CH_2OCH_2CF_3$	CH_3	H	CH_2	1	
3.0327	H	H	$CH_2OCH_2CH{=}CH_2$	CH_3	F	CH_2	1	
3.0328	H	H	$CH_2OCH_2CH{=}CH_2$	CH_3	Cl	CH_2	1	
3.0329	H	H	$CH_2OCH_2CH{=}CH_2$	CH_3	H	CH_2	1	
3.0330	H	H	$CH_2O(CO)CH_3$	CH_3	F	CH_2	1	
3.0331	H	H	$CH_2O(CO)CH_3$	CH_3	Cl	CH_2	1	
3.0332	H	H	$CH_2O(CO)CH_3$	CH_3	H	CH_2	1	
3.0333	H	H	$CH_2OCH_2C{\equiv}CH$	CH_3	F	CH_2	1	
3.0334	H	H	$CH_2OCH_2C{\equiv}CH$	CH_3	Cl	CH_2	1	
3.0335	H	H	$CH_2OCH_2C{\equiv}CH$	CH_3	H	CH_2	1	
3.0336	H	H	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	F	CH_2	1	
3.0337	H	H	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	Cl	CH_2	1	
3.0338	H	H	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	H	CH_2	1	
3.0339	H	H		CH_3	F	CH_2	1	

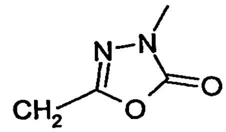
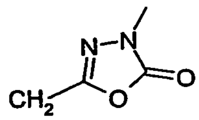
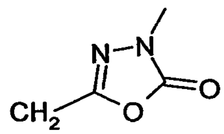
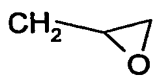
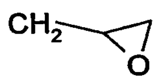
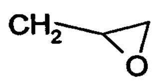
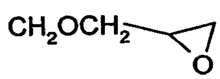
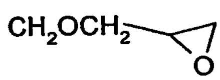
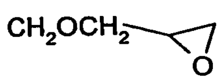
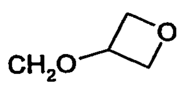
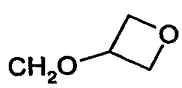
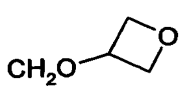
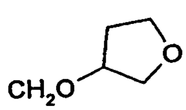
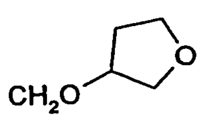
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0340	H	H		CH_3	Cl	CH_2	1	
3.0341	H	H		CH_3	H	CH_2	1	
3.0342	H	H		CH_3	F	CH_2	1	
3.0343	H	H		CH_3	Cl	CH_2	1	
3.0344	H	H		CH_3	H	CH_2	1	
3.0345	H	H		CH_3	F	CH_2	1	
3.0346	H	H		CH_3	Cl	CH_2	1	
3.0347	H	H		CH_3	H	CH_2	1	
3.0348	H	H		CH_3	F	CH_2	1	
3.0349	H	H		CH_3	Cl	CH_2	1	
3.0350	H	H		CH_3	H	CH_2	1	
3.0351	H	H		CH_3	F	CH_2	1	
3.0352	H	H		CH_3	Cl	CH_2	1	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0353	H	H		CH_3	H	CH_2	1	
3.0354	H	H		CH_3	F	CH_2	1	
3.0355	H	H		CH_3	Cl	CH_2	1	
3.0356	H	H		CH_3	H	CH_2	1	
3.0357	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	F	CH_2	1	
3.0358	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	Cl	CH_2	1	
3.0359	CH_3	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	H	CH_2	1	
3.0360	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	F	CH_2	1	
3.0361	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	Cl	CH_2	1	
3.0362	CH_3	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	H	CH_2	1	
3.0363	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	F	CH_2	1	
3.0364	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	Cl	CH_2	1	
3.0365	CH_3	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	H	CH_2	1	
3.0366	CH_3	CH_3	CH_2OCH_2Ph	CH_3	F	CH_2	1	
3.0367	CH_3	CH_3	CH_2OCH_2Ph	CH_3	Cl	CH_2	1	
3.0368	CH_3	CH_3	CH_2OCH_2Ph	CH_3	H	CH_2	1	
3.0369	CH_3	CH_3	$CH_2OCH_2CH_2OH$	CH_3	F	CH_2	1	
3.0370	CH_3	CH_3	$CH_2OCH_2CH_2OH$	CH_3	Cl	CH_2	1	
3.0371	CH_3	CH_3	$CH_2OCH_2CH_2OH$	CH_3	H	CH_2	1	
3.0372	CH_3	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	F	CH_2	1	
3.0373	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	CH_3	Cl	CH_2	1	
3.0374	CH_3	CH_3	$CH_2OCH_2CH_2$ Cl	CH_3	H	CH_2	1	
3.0375	CH_3	CH_3	$CH_2OCH_2CF_3$	CH_3	F	CH_2	1	
3.0376	CH_3	CH_3	$CH_2OCH_2CF_3$	CH_3	Cl	CH_2	1	
3.0377	CH_3	CH_3	$CH_2OCH_2CF_3$	CH_3	H	CH_2	1	
3.0378	CH_3	CH_3	$CH_2OCH_2CH=CH_2$	CH_3	F	CH_2	1	
3.0379	CH_3	CH_3	$CH_2OCH_2CH=CH_2$	CH_3	Cl	CH_2	1	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0380	CH_3	CH_3	$CH_2OCH_2CH{=}CH_2$	CH_3	H	CH_2	1	
3.0381	CH_3	CH_3	$CH_2O(CO)CH_3$	CH_3	F	CH_2	1	
3.0382	CH_3	CH_3	$CH_2O(CO)CH_3$	CH_3	Cl	CH_2	1	
3.0383	CH_3	CH_3	$CH_2O(CO)CH_3$	CH_3	H	CH_2	1	
3.0384	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	F	CH_2	1	
3.0385	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	Cl	CH_2	1	
3.0386	CH_3	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	H	CH_2	1	
3.0387	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	F	CH_2	1	
3.0388	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	Cl	CH_2	1	
3.0389	CH_3	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	H	CH_2	1	
3.0390	CH_3	CH_3		CH_3	F	CH_2	1	
3.0391	CH_3	CH_3		CH_3	Cl	CH_2	1	
3.0392	CH_3	CH_3		CH_3	H	CH_2	1	
3.0393	CH_3	CH_3		CH_3	F	CH_2	1	
3.0394	CH_3	CH_3		CH_3	Cl	CH_2	1	
3.0395	CH_3	CH_3		CH_3	H	CH_2	1	
3.0396	CH_3	CH_3		CH_3	F	CH_2	1	
3.0397	CH_3	CH_3		CH_3	Cl	CH_2	1	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0398	CH_3	CH_3		CH_3	H	CH_2	1	
3.0399	CH_3	CH_3		CH_3	F	CH_2	1	
3.0400	CH_3	CH_3		CH_3	Cl	CH_2	1	
3.0401	CH_3	CH_3		CH_3	H	CH_2	1	
3.0402	CH_3	CH_3		CH_3	F	CH_2	1	
3.0403	CH_3	CH_3		CH_3	Cl	CH_2	1	
3.0404	CH_3	CH_3		CH_3	H	CH_2	1	
3.0405	CH_3	CH_3		CH_3	F	CH_2	1	
3.0406	CH_3	CH_3		CH_3	Cl	CH_2	1	
3.0407	CH_3	CH_3		CH_3	H	CH_2	1	
3.0408	H	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	F	CH_2	1	
3.0409	H	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	Cl	CH_2	1	
3.0410	H	CH_3	$CH_2OCH_2CH_2OCH_3$	CH_3	H	CH_2	1	
3.0411	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	F	CH_2	1	
3.0412	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	Cl	CH_2	1	
3.0413	H	CH_3	$CH_2OCH_2CH_2OCH_2CH_3$	CH_3	H	CH_2	1	
3.0414	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	F	CH_2	1	
3.0415	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	Cl	CH_2	1	
3.0416	H	CH_3	$CH_2N(CH_3)SO_2CH_3$	CH_3	H	CH_2	1	
3.0417	H	CH_3	CH_2OCH_2Ph	CH_3	F	CH_2	1	
3.0418	H	CH_3	CH_2OCH_2Ph	CH_3	Cl	CH_2	1	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0419	H	CH_3	CH_2OCH_2Ph	CH_3	H	CH_2	1	
3.0420	H	CH_3	$CH_2OCH_2CH_2OH$	CH_3	F	CH_2	1	
3.0421	H	CH_3	$CH_2OCH_2CH_2OH$	CH_3	Cl	CH_2	1	
3.0422	H	CH_3	$CH_2OCH_2CH_2OH$	CH_3	H	CH_2	1	
3.0423	H	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	F	CH_2	1	
3.0424	H	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	Cl	CH_2	1	
3.0425	H	CH_3	$CH_2OCH_2CH_2Cl$	CH_3	H	CH_2	1	
3.0426	H	CH_3	$CH_2OCH_2CF_3$	CH_3	F	CH_2	1	
3.0427	H	CH_3	$CH_2OCH_2CF_3$	CH_3	Cl	CH_2	1	
3.0428	H	CH_3	$CH_2OCH_2CF_3$	CH_3	H	CH_2	1	
3.0429	H	CH_3	$CH_2OCH_2CH{=}CH_2$	CH_3	F	CH_2	1	
3.0430	H	CH_3	$CH_2OCH_2CH{=}CH_2$	CH_3	Cl	CH_2	1	
3.0431	H	CH_3	$CH_2OCH_2CH{=}CH_2$	CH_3	H	CH_2	1	
3.0432	H	CH_3	$CH_2O(CO)CH_3$	CH_3	F	CH_2	1	
3.0433	H	CH_3	$CH_2O(CO)CH_3$	CH_3	Cl	CH_2	1	
3.0434	H	CH_3	$CH_2O(CO)CH_3$	CH_3	H	CH_2	1	
3.0435	H	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	F	CH_2	1	
3.0436	H	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	Cl	CH_2	1	
3.0437	H	CH_3	$CH_2OCH_2C{\equiv}CH$	CH_3	H	CH_2	1	
3.0438	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	F	CH_2	1	
3.0439	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	Cl	CH_2	1	
3.0440	H	CH_3	$CH_2OCH_2C{\equiv}CCH_3$	CH_3	H	CH_2	1	
3.0441	H	CH_3		CH_3	F	CH_2	1	
3.0442	H	CH_3		CH_3	Cl	CH_2	1	
3.0443	H	CH_3		CH_3	H	CH_2	1	

No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0444	H	CH_3		CH_3	F	CH_2	1	
3.0445	H	CH_3		CH_3	Cl	CH_2	1	
3.0446	H	CH_3		CH_3	H	CH_2	1	
3.0447	H	CH_3		CH_3	F	CH_2	1	
3.0448	H	CH_3		CH_3	Cl	CH_2	1	
3.0449	H	CH_3		CH_3	H	CH_2	1	
3.0450	H	CH_3		CH_3	F	CH_2	1	
3.0451	H	CH_3		CH_3	Cl	CH_2	1	
3.0452	H	CH_3		CH_3	H	CH_2	1	
3.0453	H	CH_3		CH_3	F	CH_2	1	
3.0454	H	CH_3		CH_3	Cl	CH_2	1	
3.0455	H	CH_3		CH_3	H	CH_2	1	
3.0456	H	CH_3		CH_3	F	CH_2	1	
3.0457	H	CH_3		CH_3	Cl	CH_2	1	

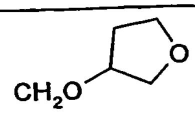
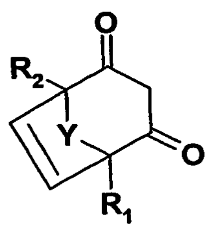
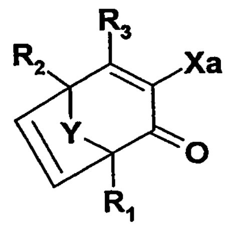
No.	R_1	R_2	Z_1	R_{30}	X	Y	p	Phys. data, remarks
3.0458	H	CH_3		CH_3	H	CH_2	1	

Table 4: Intermediates of formulae Da and Db:


(Da) and

(Db)

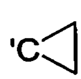
No.	R_1	R_2	R_3	Y	Xa	Physical data
4.0001	H	H	OH	CH_2	H	see Example P9; tautomeric form Da
4.0002	H	H	OCH_3	CH_2	H	
4.0003	H	H	OCH_2CH_3	CH_2	H	
4.0004	H	H	$OC(CH_3)_2$	CH_2	H	
4.0005	H	H	OH	CH_2CH_2	H	see Example P12; tautomeric form Da
4.0006	H	H	OCH_3	CH_2CH_2	H	
4.0007	H	H	OCH_2CH_3	CH_2CH_2	H	
4.0008	H	H	$OC(CH_3)_2$	CH_2CH_2	H	
4.0009	H	H	OH	O	H	^1H NMR (300 MHz; $CDCl_3$) δ 6.35 (s, 2H); 5.66 (s, 1H); 3.78 (d, 1H); 3.43 (d, 1H); tautomeric form Da
4.0010	H	H	OCH_3	O	H	
4.0011	H	H	OCH_2CH_3	O	H	
4.0012	H	H	$OC(CH_3)_2$	O	H	
4.0013	H	H	OH	NSO_2CH_3	H	
4.0014	H	H	OCH_3	NSO_2CH_3	H	
4.0015	H	H	OCH_2CH_3	NSO_2CH_3	H	
4.0016	H	H	$OC(CH_3)_2$	NSO_2CH_3	H	
4.0017	H	H	OH	$NC(O)C(CH_3)_3$	H	
4.0018	H	H	OCH_3	$NC(O)C(CH_3)_3$	H	
4.0019	H	H	OCH_2CH_3	$NC(O)C(CH_3)_3$	H	
4.0020	H	H	$OC(CH_3)_2$	$NC(O)C(CH_3)_3$	H	

No.	R_1	R_2	R_3	Y	Xa	Physical data
4.0021	H	H	OH	CH_2	Cl	
4.0022	H	H	OCH_3	CH_2	Cl	
4.0023	H	H	OCH_2CH_3	CH_2	Cl	
4.0024	H	H	$OC(CH_3)_2$	CH_2	Cl	
4.0025	H	H	OH	CH_2CH_2	Cl	see Preparation Example P11
4.0026	H	H	OCH_3	CH_2CH_2	Cl	
4.0027	H	H	OCH_2CH_3	CH_2CH_2	Cl	
4.0028	H	H	$OC(CH_3)_2$	CH_2CH_2	Cl	
4.0029	H	H	OH	O	Cl	
4.0030	H	H	OCH_3	O	Cl	
4.0031	H	H	OCH_2CH_3	O	Cl	
4.0032	H	H	$OC(CH_3)_2$	O	Cl	
4.0033	H	H	OH	NSO_2CH_3	Cl	
4.0034	H	H	OCH_3	NSO_2CH_3	Cl	
4.0035	H	H	OCH_2CH_3	NSO_2CH_3	Cl	
4.0036	H	H	$OC(CH_3)_2$	NSO_2CH_3	Cl	
4.0037	H	H	OH	$NC(O)C(CH_3)_3$	Cl	
4.0038	H	H	OCH_3	$NC(O)C(CH_3)_3$	Cl	
4.0039	H	H	OCH_2CH_3	$NC(O)C(CH_3)_3$	Cl	
4.0040	H	H	$OC(CH_3)_2$	$NC(O)C(CH_3)_3$	Cl	
4.0041	H	H	OH	CH_2	Br	
4.0042	H	H	OCH_3	CH_2	Br	
4.0043	H	H	OCH_2CH_3	CH_2	Br	
4.0044	H	H	$OC(CH_3)_2$	CH_2	Br	
4.0045	H	H	OH	CH_2CH_2	Br	
4.0046	H	H	OCH_3	CH_2CH_2	Br	
4.0047	H	H	OCH_2CH_3	CH_2CH_2	Br	
4.0048	H	H	$OC(CH_3)_2$	CH_2CH_2	Br	
4.0049	H	H	OH	O	Br	
4.0050	H	H	OCH_3	O	Br	
4.0051	H	H	OCH_2CH_3	O	Br	
4.0052	H	H	$OC(CH_3)_2$	O	Br	
4.0053	H	H	OH	NSO_2CH_3	Br	

No.	R_1	R_2	R_3	Y	Xa	Physical data
4.0054	H	H	OCH_3	NSO_2CH_3	Br	
4.0055	H	H	OCH_2CH_3	NSO_2CH_3	Br	
4.0056	H	H	$OC(CH_3)_2$	NSO_2CH_3	Br	
4.0057	H	H	OH	$NC(O)C(CH_3)_3$	Br	
4.0058	H	H	OCH_3	$NC(O)C(CH_3)_3$	Br	
4.0059	H	H	OCH_2CH_3	$NC(O)C(CH_3)_3$	Br	
4.0060	H	H	$OC(CH_3)_2$	$NC(O)C(CH_3)_3$	Br	
4.0061	H	CH_3	OH	CH_2	H	^1H NMR (300 MHz; $CDCl_3$) δ 6.30 (m, 1H); 6.10 (m, 1H); 3.73 (d, 1H); 3.44 (d, 1H); 1.62 (s, 3H); tautomeric form Db
4.0062	H	CH_3	OCH_3	CH_2	H	
4.0063	H	CH_3	OCH_2CH_3	CH_2	H	
4.0064	H	CH_3	$OC(CH_3)_2$	CH_2	H	
4.0065	H	CH_3	OH	CH_2CH_2	H	
4.0066	H	CH_3	OCH_3	CH_2CH_2	H	
4.0067	H	CH_3	OCH_2CH_3	CH_2CH_2	H	
4.0068	H	CH_3	$OC(CH_3)_2$	CH_2CH_2	H	
4.0069	H	CH_3	OH	O	H	
4.0070	H	CH_3	OCH_3	O	H	
4.0071	H	CH_3	OCH_2CH_3	O	H	
4.0072	H	CH_3	$OC(CH_3)_2$	O	H	
4.0073	H	CH_3	OH	NSO_2CH_3	H	
4.0074	H	CH_3	OCH_3	NSO_2CH_3	H	
4.0075	H	CH_3	OCH_2CH_3	NSO_2CH_3	H	
4.0076	H	CH_3	$OC(CH_3)_2$	NSO_2CH_3	H	
4.0077	H	CH_3	OH	$NC(O)C(CH_3)_3$	H	
4.0078	H	CH_3	OCH_3	$NC(O)C(CH_3)_3$	H	
4.0079	H	CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	H	
4.0080	H	CH_3	$OC(CH_3)_2$	$NC(O)C(CH_3)_3$	H	
4.0081	H	CH_3	OH	CH_2	Cl	
4.0082	H	CH_3	OCH_3	CH_2	Cl	
4.0083	H	CH_3	OCH_2CH_3	CH_2	Cl	
4.0084	H	CH_3	$OC(CH_3)_2$	CH_2	Cl	

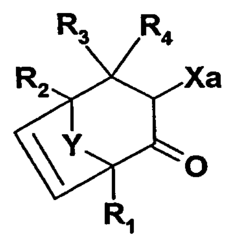
No.	R_1	R_2	R_3	Y	Xa	Physical data
4.0085	H	CH_3	OH	CH_2CH_2	Cl	
4.0086	H	CH_3	OCH_3	CH_2CH_2	Cl	
4.0087	H	CH_3	OCH_2CH_3	CH_2CH_2	Cl	
4.0088	H	CH_3	$OC(CH_3)_2$	CH_2CH_2	Cl	
4.0089	H	CH_3	OH	O	Cl	
4.0090	H	CH_3	OCH_3	O	Cl	
4.0091	H	CH_3	OCH_2CH_3	O	Cl	
4.0092	H	CH_3	$OC(CH_3)_2$	O	Cl	
4.0093	H	CH_3	OH	NSO_2CH_3	Cl	
4.0094	H	CH_3	OCH_3	NSO_2CH_3	Cl	
4.0095	H	CH_3	OCH_2CH_3	NSO_2CH_3	Cl	
4.0096	H	CH_3	$OC(CH_3)_2$	NSO_2CH_3	Cl	
4.0097	H	CH_3	OH	$NC(O)C(CH_3)_3$	Cl	
4.0098	H	CH_3	OCH_3	$NC(O)C(CH_3)_3$	Cl	
4.0099	H	CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	Cl	
4.0100	H	CH_3	$OC(CH_3)_2$	$NC(O)C(CH_3)_3$	Cl	
4.0101	H	CH_3	OH	CH_2	Br	
4.0102	H	CH_3	OCH_3	CH_2	Br	
4.0103	H	CH_3	OCH_2CH_3	CH_2	Br	
4.0104	H	CH_3	$OC(CH_3)_2$	CH_2	Br	
4.0105	H	CH_3	OH	CH_2CH_2	Br	
4.0106	H	CH_3	OCH_3	CH_2CH_2	Br	
4.0107	H	CH_3	OCH_2CH_3	CH_2CH_2	Br	
4.0108	H	CH_3	$OC(CH_3)_2$	CH_2CH_2	Br	
4.0109	H	CH_3	OH	O	Br	
4.0110	H	CH_3	OCH_3	O	Br	
4.0111	H	CH_3	OCH_2CH_3	O	Br	
4.0112	H	CH_3	$OC(CH_3)_2$	O	Br	
4.0113	H	CH_3	OH	NSO_2CH_3	Br	
4.0114	H	CH_3	OCH_3	NSO_2CH_3	Br	
4.0115	H	CH_3	OCH_2CH_3	NSO_2CH_3	Br	
4.0116	H	CH_3	$OC(CH_3)_2$	NSO_2CH_3	Br	
4.0117	H	CH_3	OH	$NC(O)C(CH_3)_3$	Br	

No.	R_1	R_2	R_3	Y	Xa	Physical data
4.0118	H	CH_3	OCH_3	$NC(O)C(CH_3)_3$	Br	
4.0119	H	CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	Br	
4.0120	H	CH_3	$OC(CH_3)_2$	$NC(O)C(CH_3)_3$	Br	
4.0121	CH_3	CH_3	OH	CH_2	H	
4.0122	CH_3	CH_3	OCH_3	CH_2	H	
4.0123	CH_3	CH_3	OCH_2CH_3	CH_2	H	
4.0124	CH_3	CH_3	$OC(CH_3)_2$	CH_2	H	
4.0125	CH_3	CH_3	OH	CH_2CH_2	H	
4.0126	CH_3	CH_3	OCH_3	CH_2CH_2	H	
4.0127	CH_3	CH_3	OCH_2CH_3	CH_2CH_2	H	
4.0128	CH_3	CH_3	$OC(CH_3)_2$	CH_2CH_2	H	
4.0129	CH_3	CH_3	OH	O	H	
4.0130	CH_3	CH_3	OCH_3	O	H	
4.0131	CH_3	CH_3	OCH_2CH_3	O	H	
4.0132	CH_3	CH_3	$OC(CH_3)_2$	O	H	
4.0133	CH_3	CH_3	OH	NSO_2CH_3	H	
4.0134	CH_3	CH_3	OCH_3	NSO_2CH_3	H	
4.0135	CH_3	CH_3	OCH_2CH_3	NSO_2CH_3	H	
4.0136	CH_3	CH_3	$OC(CH_3)_2$	NSO_2CH_3	H	
4.0137	CH_3	CH_3	OH	$NC(O)C(CH_3)_3$	H	
4.0138	CH_3	CH_3	OCH_3	$NC(O)C(CH_3)_3$	H	
4.0139	CH_3	CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	H	
4.0140	CH_3	CH_3	$OC(CH_3)_2$	$NC(O)C(CH_3)_3$	H	
4.0141	CH_3	CH_3	OH	CH_2	Cl	
4.0142	CH_3	CH_3	OCH_3	CH_2	Cl	see Preparation Example P3
4.0143	CH_3	CH_3	OCH_2CH_3	CH_2	Cl	
4.0144	CH_3	CH_3	$OC(CH_3)_2$	CH_2	Cl	
4.0145	CH_3	CH_3	OH	CH_2CH_2	Cl	
4.0146	CH_3	CH_3	OCH_3	CH_2CH_2	Cl	
4.0147	CH_3	CH_3	OCH_2CH_3	CH_2CH_2	Cl	
4.0148	CH_3	CH_3	$OC(CH_3)_2$	CH_2CH_2	Cl	
4.0149	CH_3	CH_3	OH	O	Cl	
4.0150	CH_3	CH_3	OCH_3	O	Cl	

No.	R_1	R_2	R_3	Y	Xa	Physical data
4.0151	CH_3	CH_3	OCH_2CH_3	O	Cl	
4.0152	CH_3	CH_3	$OC(CH_3)_2$	O	Cl	
4.0153	CH_3	CH_3	OH	NSO_2CH_3	Cl	
4.0154	CH_3	CH_3	OCH_3	NSO_2CH_3	Cl	
4.0155	CH_3	CH_3	OCH_2CH_3	NSO_2CH_3	Cl	
4.0156	CH_3	CH_3	$OC(CH_3)_2$	NSO_2CH_3	Cl	
4.0157	CH_3	CH_3	OH	$NC(O)C(CH_3)_3$	Cl	
4.0158	CH_3	CH_3	OCH_3	$NC(O)C(CH_3)_3$	Cl	
4.0159	CH_3	CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	Cl	
4.0160	CH_3	CH_3	$OC(CH_3)_2$	$NC(O)C(CH_3)_3$	Cl	
4.0161	CH_3	CH_3	OH	CH_2	Br	
4.0162	CH_3	CH_3	OCH_3	CH_2	Br	
4.0163	CH_3	CH_3	OCH_2CH_3	CH_2	Br	
4.0164	CH_3	CH_3	$OC(CH_3)_2$	CH_2	Br	
4.0165	CH_3	CH_3	OH	CH_2CH_2	Br	
4.0166	CH_3	CH_3	OCH_3	CH_2CH_2	Br	
4.0167	CH_3	CH_3	OCH_2CH_3	CH_2CH_2	Br	
4.0168	CH_3	CH_3	$OC(CH_3)_2$	CH_2CH_2	Br	
4.0169	CH_3	CH_3	OH	O	Br	
4.0170	CH_3	CH_3	OCH_3	O	Br	
4.0171	CH_3	CH_3	OCH_2CH_3	O	Br	
4.0172	CH_3	CH_3	$OC(CH_3)_2$	O	Br	see Preparation Example P6
4.0173	CH_3	CH_3	OH	NSO_2CH_3	Br	
4.0174	CH_3	CH_3	OCH_3	NSO_2CH_3	Br	
4.0175	CH_3	CH_3	OCH_2CH_3	NSO_2CH_3	Br	
4.0176	CH_3	CH_3	$OC(CH_3)_2$	NSO_2CH_3	Br	
4.0177	CH_3	CH_3	OH	$NC(O)C(CH_3)_3$	Br	
4.0178	CH_3	CH_3	OCH_3	$NC(O)C(CH_3)_3$	Br	
4.0179	CH_3	CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	Br	
4.0180	CH_3	CH_3	$OC(CH_3)_2$	$NC(O)C(CH_3)_3$	Br	
4.0181	H	H	OH		H	^1H NMR (300 MHz; $CDCl_3$) δ 6.30 (sxm, 2H); 3.60 (d, 1H); 3.23 (d, 1H); 2.82 (s, 1H); 0.75 (m, 4H); tautomeric form Db

No.	R₁	R₂	R₃	Y	Xa	Physical data
4.0182	H	H	OH	$C(=C(CH_3)_2)$	H	^1H NMR (300 MHz; $CDCl_3$) δ 6.82 (sxm, 2H); 4.14 (sxm, 2H); 3.60 (d, 1H); 3.13 (d, 1H); 1.75 (s, 6H); tautomeric form Db
4.0183	H	H	OH	$CH_2CH(COOCH_3)$	H	R_7= Br, see Preparation Example P13
4.0184	H	H	OH	$CH_2CH(COOCH_3)$	H	R_7= CH

Table 5: Intermediates of formulae VII:



(VII)

No.	R_1	R_2	R_3	R_4	Y	Xa	Physical data
5.0000	H	H	OCH_3	OCH_3	CH_2	H	
5.0001	H	H	OCH_2CH_3	OCH_2CH_3	CH_2	H	
5.0002	H	H	$-OCH_2CH_2O-$		CH_2	H	see Example P8
5.0003	H	H	OCH_3	OCH_3	O	H	
5.0004	H	H	OCH_2CH_3	OCH_2CH_3	O	H	
5.0005	H	H	$-OCH_2CH_2O-$		O	H	
5.0006	H	H	OCH_3	OCH_3	NSO_2CH_3	H	
5.0007	H	H	OCH_2CH_3	OCH_2CH_3	NSO_2CH_3	H	
5.0008	H	H	$-OCH_2CH_2O-$		NSO_2CH_3	H	
5.0009	H	H	OCH_3	OCH_3	$NC(O)C(CH_3)_3$	H	
5.0010	H	H	OCH_2CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	H	
5.0011	H	H	$-OCH_2CH_2O-$		$NC(O)C(CH_3)_3$	H	
5.0012	H	H	OCH_3	OCH_3	CH_2CH_2	H	
5.0013	H	H	OCH_2CH_3	OCH_2CH_3	CH_2CH_2	H	
5.0014	H	H	$-OCH_2CH_2O-$		CH_2CH_2	H	
5.0015	H	H	OCH_3	OCH_3	CH_2	Cl	
5.0016	H	H	OCH_2CH_3	OCH_2CH_3	CH_2	Cl	
5.0017	H	H	$-OCH_2CH_2O-$		CH_2	Cl	

No.	R_1	R_2	R_3	R_4	Y	Xa	Physical data
5.0018	H	H	OCH_3	OCH_3	O	Cl	
5.0019	H	H	OCH_2CH_3	OCH_2CH_3	O	Cl	
5.0020	H	H	$-OCH_2CH_2O-$		O	Cl	
5.0021	H	H	OCH_3	OCH_3	NSO_2CH_3	Cl	
5.0022	H	H	OCH_2CH_3	OCH_2CH_3	NSO_2CH_3	Cl	
5.0023	H	H	$-OCH_2CH_2O-$		NSO_2CH_3	Cl	
5.0024	H	H	OCH_3	OCH_3	$NC(O)C(CH_3)_3$	Cl	
5.0025	H	H	OCH_2CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	Cl	
5.0026	H	H	$-OCH_2CH_2O-$		$NC(O)C(CH_3)_3$	Cl	
5.0027	H	H	OCH_3	OCH_3	CH_2CH_2	Cl	
5.0028	H	H	OCH_2CH_3	OCH_2CH_3	CH_2CH_2	Cl	
5.0029	H	H	$-OCH_2CH_2O-$		CH_2CH_2	Cl	
5.0030	H	H	OCH_3	OCH_3	CH_2	Br	
5.0031	H	H	OCH_2CH_3	OCH_2CH_3	CH_2	Br	
5.0032	H	H	$-OCH_2CH_2O-$		CH_2	Br	
5.0033	H	H	OCH_3	OCH_3	O	Br	
5.0034	H	H	OCH_2CH_3	OCH_2CH_3	O	Br	
5.0035	H	H	$-OCH_2CH_2O-$		O	Br	
5.0036	H	H	OCH_3	OCH_3	NSO_2CH_3	Br	
5.0037	H	H	OCH_2CH_3	OCH_2CH_3	NSO_2CH_3	Br	
5.0038	H	H	$-OCH_2CH_2O-$		NSO_2CH_3	Br	
5.0039	H	H	OCH_3	OCH_3	$NC(O)C(CH_3)_3$	Br	
5.0040	H	H	OCH_2CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	Br	
5.0041	H	H	$-OCH_2CH_2O-$		$NC(O)C(CH_3)_3$	Br	
5.0042	H	H	OCH_3	OCH_3	CH_2CH_2	Br	
5.0043	H	H	OCH_2CH_3	OCH_2CH_3	CH_2CH_2	Br	
5.0044	H	H	$-OCH_2CH_2O-$		CH_2CH_2	Br	
5.0045	H	CH_3	OCH_3	OCH_3	CH_2	H	
5.0046	H	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2	H	
5.0047	H	CH_3	$-OCH_2CH_2O-$		CH_2	H	
5.0048	H	CH_3	OCH_3	OCH_3	O	H	
5.0049	H	CH_3	OCH_2CH_3	OCH_2CH_3	O	H	
5.0050	H	CH_3	$-OCH_2CH_2O-$		O	H	

No.	R_1	R_2	R_3	R_4	Y	Xa	Physical data
5.0051	H	CH_3	OCH_3	OCH_3	NSO_2CH_3	H	
5.0052	H	CH_3	OCH_2CH_3	OCH_2CH_3	NSO_2CH_3	H	
5.0053	H	CH_3	$-OCH_2CH_2O-$		NSO_2CH_3	H	
5.0054	H	CH_3	OCH_3	OCH_3	$NC(O)C(CH_3)_3$	H	
5.0055	H	CH_3	OCH_2CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	H	
5.0056	H	CH_3	$-OCH_2CH_2O-$		$NC(O)C(CH_3)_3$	H	
5.0057	H	CH_3	OCH_3	OCH_3	CH_2CH_2	H	
5.0058	H	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2CH_2	H	
5.0059	H	CH_3	$-OCH_2CH_2O-$		CH_2CH_2	H	
5.0060	H	CH_3	OCH_3	OCH_3	CH_2	Cl	
5.0061	H	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2	Cl	
5.0062	H	CH_3	$-OCH_2CH_2O-$		CH_2	Cl	
5.0063	H	CH_3	OCH_3	OCH_3	O	Cl	
5.0064	H	CH_3	OCH_2CH_3	OCH_2CH_3	O	Cl	
5.0065	H	CH_3	$-OCH_2CH_2O-$		O	Cl	
5.0066	H	CH_3	OCH_3	OCH_3	NSO_2CH_3	Cl	
5.0067	H	CH_3	OCH_2CH_3	OCH_2CH_3	NSO_2CH_3	Cl	
5.0068	H	CH_3	$-OCH_2CH_2O-$		NSO_2CH_3	Cl	
5.0069	H	CH_3	OCH_3	OCH_3	$NC(O)C(CH_3)_3$	Cl	
5.0070	H	CH_3	OCH_2CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	Cl	
5.0071	H	CH_3	$-OCH_2CH_2O-$		$NC(O)C(CH_3)_3$	Cl	
5.0072	H	CH_3	OCH_3	OCH_3	CH_2CH_2	Cl	
5.0073	H	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2CH_2	Cl	
5.0074	H	CH_3	$-OCH_2CH_2O-$		CH_2CH_2	Cl	
5.0075	H	CH_3	OCH_3	OCH_3	CH_2	Br	
5.0076	H	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2	Br	
5.0077	H	CH_3	$-OCH_2CH_2O-$		CH_2	Br	
5.0078	H	CH_3	OCH_3	OCH_3	O	Br	
5.0079	H	CH_3	OCH_2CH_3	OCH_2CH_3	O	Br	
5.0080	H	CH_3	$-OCH_2CH_2O-$		O	Br	
5.0081	H	CH_3	OCH_3	OCH_3	NSO_2CH_3	Br	
5.0082	H	CH_3	OCH_2CH_3	OCH_2CH_3	NSO_2CH_3	Br	
5.0083	H	CH_3	$-OCH_2CH_2O-$		NSO_2CH_3	Br	

No.	R_1	R_2	R_3	R_4	Y	Xa	Physical data
5.0084	H	CH_3	OCH_3	OCH_3	$NC(O)C(CH_3)_3$	Br	
5.0085	H	CH_3	OCH_2CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	Br	
5.0086	H	CH_3	$-OCH_2CH_2O-$		$NC(O)C(CH_3)_3$	Br	
5.0087	H	CH_3	OCH_3	OCH_3	CH_2CH_2	Br	
5.0088	H	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2CH_2	Br	
5.0089	H	CH_3	$-OCH_2CH_2O-$		CH_2CH_2	Br	
5.0090	CH_3	CH_3	OCH_3	OCH_3	CH_2	H	
5.0091	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2	H	
5.0092	CH_3	CH_3	$-OCH_2CH_2O-$		CH_2	H	
5.0093	CH_3	CH_3	OCH_3	OCH_3	O	H	see Example P5
5.0094	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	O	H	
5.0095	CH_3	CH_3	$-OCH_2CH_2O-$		O	H	
5.0096	CH_3	CH_3	OCH_3	OCH_3	NSO_2CH_3	H	
5.0097	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	NSO_2CH_3	H	
5.0098	CH_3	CH_3	$-OCH_2CH_2O-$		NSO_2CH_3	H	
5.0099	CH_3	CH_3	OCH_3	OCH_3	$NC(O)C(CH_3)_3$	H	
5.0100	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	H	
5.0101	CH_3	CH_3	$-OCH_2CH_2O-$		$NC(O)C(CH_3)_3$	H	
5.0102	CH_3	CH_3	OCH_3	OCH_3	CH_2CH_2	H	
5.0103	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2CH_2	H	
5.0104	CH_3	CH_3	$-OCH_2CH_2O-$		CH_2CH_2	H	
5.0105	CH_3	CH_3	OCH_3	OCH_3	CH_2	Cl	
5.0106	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2	Cl	
5.0107	CH_3	CH_3	$-OCH_2CH_2O-$		CH_2	Cl	
5.0108	CH_3	CH_3	OCH_3	OCH_3	O	Cl	see Example P3
5.0109	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	O	Cl	
5.0110	CH_3	CH_3	$-OCH_2CH_2O-$		O	Cl	
5.0111	CH_3	CH_3	OCH_3	OCH_3	NSO_2CH_3	Cl	
5.0112	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	NSO_2CH_3	Cl	
5.0113	CH_3	CH_3	$-OCH_2CH_2O-$		NSO_2CH_3	Cl	
5.0114	CH_3	CH_3	OCH_3	OCH_3	$NC(O)C(CH_3)_3$	Cl	
5.0115	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	Cl	
5.0116	CH_3	CH_3	$-OCH_2CH_2O-$		$NC(O)C(CH_3)_3$	Cl	

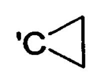
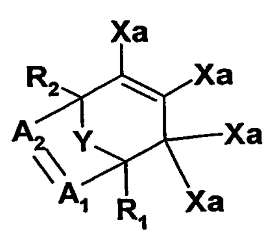
No.	R_1	R_2	R_3	R_4	Y	Xa	Physical data
5.0117	CH_3	CH_3	OCH_3	OCH_3	CH_2CH_2	Cl	
5.0118	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2CH_2	Cl	
5.0119	CH_3	CH_3	$-OCH_2CH_2O-$		CH_2CH_2	Cl	
5.0120	CH_3	CH_3	OCH_3	OCH_3	CH_2	Br	
5.0121	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2	Br	
5.0122	CH_3	CH_3	$-OCH_2CH_2O-$		CH_2	Br	
5.0123	CH_3	CH_3	OCH_3	OCH_3	O	Br	
5.0124	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	O	Br	
5.0125	CH_3	CH_3	$-OCH_2CH_2O-$		O	Br	
5.0126	CH_3	CH_3	OCH_3	OCH_3	NSO_2CH_3	Br	
5.0127	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	NSO_2CH_3	Br	
5.0128	CH_3	CH_3	$-OCH_2CH_2O-$		NSO_2CH_3	Br	
5.0129	CH_3	CH_3	OCH_3	OCH_3	$NC(O)C(CH_3)_3$	Br	
5.0130	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	$NC(O)C(CH_3)_3$	Br	
5.0131	CH_3	CH_3	$-OCH_2CH_2O-$		$NC(O)C(CH_3)_3$	Br	
5.0132	CH_3	CH_3	OCH_3	OCH_3	CH_2CH_2	Br	
5.0133	CH_3	CH_3	OCH_2CH_3	OCH_2CH_3	CH_2CH_2	Br	
5.0134	CH_3	CH_3	$-OCH_2CH_2O-$		CH_2CH_2	Br	
5.0135	H	H	$-OCH_2CH_2O-$			Cl	Amorphous crystals

Table 6: Intermediates of formula VI:



(VI)

No.	A_1	A_2	R_1	R_2	Y	Xa	Physical data
6.0000	CH	CH	H	H	C(=CH(OAc))	Cl	major isomer I : ^{1}H NMR (300 MHz; $CDCl_3$) δ 7.12 (s, 1H); 6.77 (dxd, 1H); 6.35 (dxd, 1H); 4.02 (d, 1H); 3.95 (d, 1H); 2.18 (s, 3H).
6.0001	CH	CH	H	H	C(=CH(OAc))	Cl	minor isomer II: ^{1}H NMR (300 MHz; $CDCl_3$) δ 7.14 (s, 1H); 6.84 (dxd, 1H); 6.29 (dxd, 1H); 4.55 (d, 1H); 3.54 (d, 1H); 2.19 (s, 3H).

Biological Examples

Example B1: Herbicidal action prior to emergence of the plants (pre-emergence action)
Monocotyledonous and dicotyledonous test plants are sown in standard soil in plastic pots. Immediately after sowing, the test compounds, in the form of an aqueous suspension (prepared from a 25 % wettable powder (Example F3, b) according to WO 97/34485) or in the form of an emulsion (prepared from a 25 % emulsifiable concentrate (Example F1, c)), are applied by spraying in a concentration corresponding to 125 g or 250 g of active ingredient/ha (500 litres of water/ha). The test plants are then grown in a greenhouse under optimum conditions. After a test duration of 3 weeks, the test is evaluated in accordance with a scale of ten ratings (10 = total damage, 0 = no action). Ratings of from 10 to 6 (especially from 10 to 8) indicate good to very good herbicidal action. The compounds of formula I exhibit strong herbicidal action in this test. Examples of the good herbicidal action of the compounds are given in Table B1:

Table B1: Pre-emergence herbicidal action:

Ex. No.	gr/ha	*Panicum*	*Echinochloa*	*Abutilon*	*Amaranthus*	*Chenopodium*	*Kochia*
1.0301	250	7	7	7	8	9	8
1.0411	250	10	9	10	10	10	10

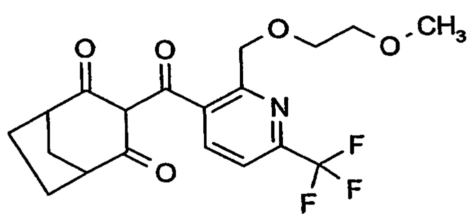
Example B2: Post-emergence herbicidal action
In a greenhouse, monocotyledonous and dicotyledonous test plants are grown in standard soil in plastic pots and at the 4- to 6-leaf stage are sprayed with an aqueous suspension of the test compounds of formula I prepared from a 25 % wettable powder (Example F3, b) according to WO 97/34485) or with an emulsion of the test compounds of formula I prepared from a 25 % emulsifiable concentrate (Example F1, c) according to WO 97/34485), in a concentration corresponding to 125 g or 250 g of active ingredient/ha (500 litres of water/ha). The test plants are then grown on in a greenhouse under optimum conditions. After a test duration of about 18 days, the test is evaluated in accordance with a scale of ten ratings (10 = total damage, 0 = no action). Ratings of from 10 to 6 (especially from 10 to 7) indicate good to very good herbicidal action. The compounds of formula I exhibit a strong herbicidal action in this test. Examples of the good herbicidal action of the compounds are given in Table B2:

Table B2: Post-emergence herbicidal action:

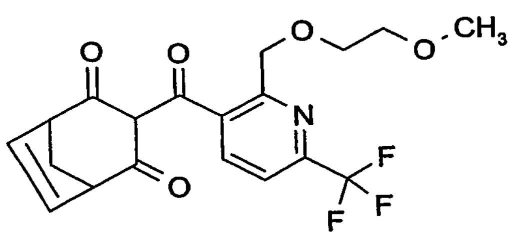
Ex. No.	gr/ha	*Abutilon*	*Ipomea*	*Amaranthus*	*Chenopodium*	*Stellaria*	*Abutilon*
1.0301	250	9	8	8	8	8	8
1.0411	250	9	10	9	10	9	9
1.1153	250	7	8	7	8	10	8

Example B3: Comparison test with a compound from the prior art: post-emergence herbicidal action:

The post-emergence herbicidal action of compound No. 1.0411 according to the invention is compared with compound "A" from WO 01/94339:



Compound "A" from WO 01/94339



Compound 1.0411 according to the present invention

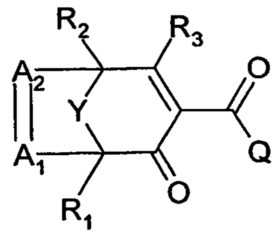
Table B3: Post-emergence action:

Ex. No.	gr/ha	*Brachiaria*	*Rottboelia*	*Sida*	*Polygonum*	*Sinapis*	*Galium*
1.0411	15	10	3	8	8	8	6
A	15	4	0	7	5	6	5

It can be seen from Table B3 that compound No. 1.0411 according to the invention at a rate of application of 15 g/ha exhibits considerably better herbicidal action on the weeds than compound "A" from the prior art. This enhanced action was not to be expected in view of the structural similarity of the compounds.

What is claimed is:

1. A compound of formula I



(I)

wherein

Y is oxygen, NR_{4a}, sulfur, sulfonyl, sulfinyl, C(O), $C(=NR_{4b})$, $C(=CR_{6a}R_{6b})$ or a C_1-C_4alkylene or C_2-C_4alkenylene chain, which may be interrupted by oxygen, NR_{5a}, sulfur, sulfonyl, sulfinyl, C(O) or $C(=NR_{5b})$ and/or mono- or poly-substituted by R_6;

A_1 is nitrogen or CR_7;

A_2 is nitrogen or CR_8;

R_1, R_2, R_6, R_7 and R_8 are each independently of the others hydrogen, hydroxy, mercapto, NO_2, cyano, halogen, formyl, oxyiminomethylene, C_1-C_6alkoxyiminomethylene, C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_3-C_6alkenyloxy, C_3-C_6alkynyloxy, C_3-C_6oxacycloalkyl, C_3-C_6thiacycloalkyl, C_3-C_6dioxacycloalkyl, C_3-C_6dithiacycloalkyl, C_3-C_6oxathiacycloalkyl, C_1-C_6alkoxycarbonyl, C_1-C_6alkylcarbonyl, C_1-C_6alkoxycarbonyloxy, C_1-C_6alkylcarbonyloxy, C_1-C_6alkylthio, C_1-C_6-alkylsulfonyl, C_1-C_6alkylsulfinyl, NR_9R_{10}, C_3-C_6cycloalkyl, tri(C_1-C_6alkyl)silyl, di(C_1-C_6alkyl)-phenylsilyl, tri(C_1-C_6alkyl)silyloxy, di(C_1-C_6alkyl)phenylsilyloxy or Ar_1;

or R_1, R_2, R_6, R_7, R_8 are each independently of the others a C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl or C_3-C_6cycloalkyl group, which may be interrupted by oxygen, sulfur, sulfonyl, sulfinyl, $-NR_{11}-$ or –C(O)- and/or mono-, di- or tri-substituted by hydroxy, mercapto, NO_2, cyano, halogen, formyl, C_1-C_6alkoxy, C_3-C_6alkenyloxy, C_3-C_6alkynyloxy, C_1-C_6haloalkoxy, C_1-C_2alkoxy-C_1-C_2alkoxy, C_1-C_4alkoxycarbonyloxy, C_1-C_4alkylcarbonyloxy, C_1-C_4alkoxy-carbonyl, C_1-C_4alkylcarbonyl, C_1-C_6alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6alkylsulfonyl, $NR_{12}R_{13}$, C_1-C_6alkyl, C_2-C_6alkenyl, C_2-C_6alkynyl, C_3-C_6cycloalkyl, tri(C_1-C_6alkyl)silyl, tri(C_1-C_6alkyl)-silyloxy or Ar_2;

or two substituents R_6 at the same carbon atom together form a $-CH_2O-$ or a C_2-C_5alkylene chain, which may be interrupted once or twice by oxygen, sulfur, sulfinyl or sulfonyl and/or mono- or poly-substituted by R_{6c}, with the proviso that two hetero atoms may not be located next to one another;

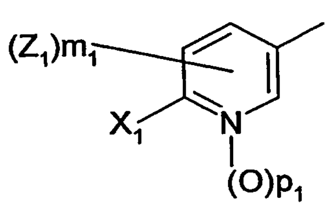
or two substituents R_6 at different carbon atoms together form an oxygen bridge or a C_1-C_4alkylene chain, which may in turn be substituted by R_{6c};

or R_7 and R_8 together form a $-CH_2CH=CH-$, $-OCH=CH-$ or $-CH=CH-CH=CH-$ bridge or a C_3-C_4alkylene chain, which may be interrupted by oxygen or $-S(O)_{n1}-$ and/or mono- or poly-substituted by R_{6d};

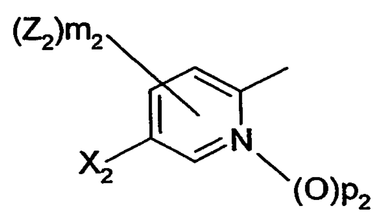
R_3 is hydroxy, halogen, mercapto, C_1-C_8alkylthio, C_1-C_8alkylsulfinyl, C_1-C_8alkylsulfonyl, C_1-C_8haloalkylthio, C_1-C_8haloalkylsulfinyl, C_1-C_8haloalkylsulfonyl, C_1-C_4alkoxy-C_1-C_4alkylthio, C_1-C_4alkoxy-C_1-C_4alkylsulfinyl, C_1-C_4alkoxy-C_1-C_4alkylsulfonyl, C_3-C_8alkenylthio, C_3-C_8-alkynylthio, C_1-C_4alkylthio-C_1-C_4alkylthio, C_3-C_4alkenylthio-C_1-C_4alkylthio, C_1-C_4alkoxy-carbonyl-C_1-C_4alkylthio, C_1-C_4alkoxycarbonyl-C_1-C_4alkylsulfinyl, C_1-C_4alkoxycarbonyl-C_1-C_4alkylsulfonyl, C_3-C_8cycloalkylthio, C_3-C_8cycloalkylsulfinyl, C_3-C_8cycloalkylsulfonyl, phenyl-C_1-C_4alkylthio, phenyl-C_1-C_4alkylsulfinyl, phenyl-C_1-C_4alkylsulfonyl, $S(O)n_1$-Ar_3, phenylthio, phenylsulfinyl, phenylsulfonyl, it being possible for the phenyl-containing groups to be substituted by one or more C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3alkoxy, C_1-C_3haloalkoxy, C_1-C_4alkoxycarbonyl, halogen, cyano, hydroxy or nitro groups;

or R_3 is O^-M^+, wherein M^+ is an alkali metal cation or an ammonium cation;

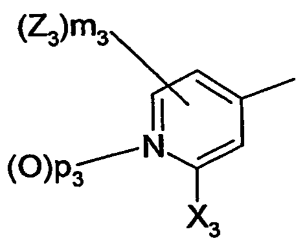
Q is a radical



(Q_1),



(Q_2) or



(Q_3), wherein

p_1, p_2 and p_3 are 0 or 1;

m_1, m_2 and m_3 are 1, 2 or 3;

X_1, X_2 and X_3 are hydroxy, halogen, C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6halo-alkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_1-C_6alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylthio, C_1-C_6haloalkylsulfinyl or C_1-C_6halo-alkylsulfonyl;

Z_1, Z_2 and Z_3 are C_1-C_6alkyl which is substituted by the following substituents: C_3-C_4cyclo-alkyl or C_3-C_4cycloalkyl substituted by halogen, C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-

C_1-C_3alkyl; oxiranyl or oxiranyl substituted by C_1-C_6alkyl or C_1-C_3alkoxy-C_1-C_3alkyl; 3-oxetanyl or 3-oxetanyl substituted by C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl; 3-oxetanyloxy or 3-oxetanyloxy substituted by C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3-alkyl; C_3-C_6cycloalkyloxy or C_3-C_4cycloalkyloxy substituted by halogen, C_1-C_6alkyl, C_1-C_3-alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl; C_1-C_6haloalkoxy; C_1-C_6alkylsulfonyloxy; C_1-C_6haloalkyl-sulfonyloxy; phenylsulfonyloxy; benzylsulfonyloxy; benzoyloxy; phenoxy; phenylthio; phenyl-sulfinyl; phenylsulfonyl; Ar_{10}; OAr_{12}; tri(C_1-C_6alkyl)silyl or tri(C_1-C_6alkyl)silyloxy, it being possible for the phenyl-containing groups to be mono- or poly-substituted by C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3alkoxy, C_1-C_3haloalkoxy, halogen, cyano, hydroxy or nitro;

or Z_1, Z_2 and Z_3 are 3-oxetanyl; 3-oxetanyl substituted by C_1-C_3alkoxy, C_1-C_3alkoxy-C_1-C_3alkyl or C_1-C_6alkyl; C_3-C_6cycloalkyl substituted by halogen, C_1-C_3alkyl or C_1-C_3alkoxy-C_1-C_3alkyl; tri(C_1-C_6alkyl)silyl; tri(C_1-C_6alkyl)silyloxy or CH=P(phenyl)$_3$;

or Z_1, Z_2 and Z_3 are a C_1-C_6alkyl, C_2-C_6alkenyl or C_2-C_6alkynyl group, which is interrupted by oxygen, -O(CO)-, -(CO)O-, -O(CO)O-, -N(R_{14})O-, -ONR$_{15}$-, sulfur, sulfinyl, sulfonyl, -SO$_2$NR$_{16}$-, -NR$_{17}$SO$_2$- or –NR$_{18}$- and is mono- or poly-substituted by L_1; it also being possible for L_1 to be bonded at the terminal carbon atom of the C_1-C_6alkyl, C_2-C_6alkenyl or C_2-C_6alkynyl group;

or Z_1, Z_2 and Z_3 are hydrogen, hydroxy, mercapto, NO_2, cyano, halogen, formyl, C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_1-C_6alkoxycarbonyl, C_1-C_6alkylcarbonyl, C_1-C_6alkylthio, C_1-C_6alkylsulfonyl, C_1-C_6alkylsulfinyl, NR$_{22}$R$_{23}$, phenyl which may be mono- or poly-substituted by C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3alkoxy, C_1-C_3haloalkoxy, halogen, cyano, hydroxy or nitro, C_3-C_6cyclo-alkyl, C_5-C_6cycloalkyl substituted by C_1-C_3alkoxy, C_1-C_3alkoxy-C_1-C_3alkyl or C_1-C_6alkyl, or Ar_5, O-Ar_6, N(R_{24})Ar_7 or S(O)$n_8$$Ar_8$;

L_1 is hydrogen, halogen, hydroxy, amino, formyl, nitro, cyano, mercapto, carbamoyl, P(O)(OC$_1$-C$_6$alkyl)$_2$, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_1-C_6alkoxycarbonyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_3-C_6cycloalkyl, halo-substituted C_3-C_6cycloalkyl, C_3-C_6alkenyloxy, C_3-C_6alkynyloxy, C_3-C_6haloalkenyloxy, cyano-C_1-C_6alkoxy, C_1-C_6alkoxy-C_1-C_6alkoxy, C_1-C_6alkylthio-C_1-C_6alkoxy, C_1-C_6alkylsulfinyl-C_1-C_6alkoxy, C_1-C_6-alkylsulfonyl-C_1-C_6alkoxy, C_1-C_6alkoxycarbonyl-C_1-C_6alkoxy, C_1-C_6alkylcarbonyloxy-C_1-C_6-alkylcarbonyl, C_1-C_6alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylthio, C_1-C_6haloalkylsulfinyl, C_1-C_6haloalkylsulfonyl or oxiranyl, which may in turn be substituted by C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl, or (3-oxetanyl)-oxy, which may in turn be substituted by C_1-C_6alkyl, C_1-C_3alkoxy or C_1-C_3alkoxy-C_1-C_3alkyl, or benzoyloxy, benzyloxy, benzylthio, benzylsulfinyl, benzylsulfonyl, C_1-C_6alkylamino, di(C_1-C_6alkyl)amino, R_{19}S(O)$_2$O-, R_{20}N(R_{21})SO$_2$-, rhodano, phenyl, phenoxy, phenylthio, phenylsulfinyl, phenylsulfonyl, Ar_4 or

OAr_{11}, it being possible for the phenyl-containing groups in turn to be substituted by one or more C_1-C_3alkyl, C_1-C_3haloalkyl, C_1-C_3alkoxy, C_1-C_3haloalkoxy, halogen, cyano, hydroxy or nitro groups;
R_{4a} and R_{5a} are each independently of the other hydrogen, C_1-C_6alkyl, C_1-C_6haloalkyl, cyano, formyl, C_1-C_6alkylcarbonyl, C_1-C_6alkoxycarbonyl, carbamoyl, C_1-C_6alkylaminocarbonyl, di(C_1-C_6alkylamino)carbonyl, di(C_1-C_6alkylamino)sulfonyl, C_3-C_6cycloalkylcarbonyl, C_1-C_6-alkylsulfonyl, phenylcarbonyl, phenylaminocarbonyl or phenylsulfonyl, it being possible for the phenyl groups to be mono- or poly-substituted by C_1-C_6alkyl, C_1-C_6haloalkyl, C_1-C_6-alkoxy, C_1-C_6haloalkoxy, halogen, cyano, hydroxy or nitro;
R_{4b} and R_{5b} are each independently of the other hydroxy, C_1-C_6alkoxy, C_3-C_6alkenyloxy, C_3-C_6alkynyloxy or benzyloxy, it being possible for the benzyl group to be mono- or poly-substituted by C_1-C_6alkyl, C_1-C_6haloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, halogen, cyano, hydroxy or nitro;
R_9, R_{11}, R_{13}, R_{16}, R_{17}, R_{18}, R_{20}, R_{23} and R_{24} are each independently of the others hydrogen, C_1-C_6alkyl, Ar_9, C_1-C_6haloalkyl, C_1-C_6alkylcarbonyl, C_1-C_6alkoxycarbonyl, C_1-C_6alkylsulfonyl, phenyl, it being possible for the phenyl group in turn to be mono- or poly-substituted by C_1-C_6alkyl, C_1-C_6haloalkyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, halogen, cyano, hydroxy or nitro;
R_{6a} is hydrogen, C_1-C_6alkyl or C_1-C_6alkylcarbonyl; or together with R_{6b} is a C_2-C_5alkylene chain;
R_{6b}, R_{6d}, R_{10}, R_{12} and R_{22} are each independently of the others hydrogen or C_1-C_6alkyl;
R_{6c}, R_{14}, R_{15}, R_{19} and R_{21} are each independently of the others C_1-C_6alkyl or C_1-C_6haloalkyl;
Ar_1, Ar_2, Ar_3, Ar_4, Ar_5, Ar_6, Ar_7, Ar_8, Ar_9, Ar_{10}, Ar_{11} and Ar_{12} are each independently of the others a five- to ten-membered, monocyclic or fused bicyclic ring system, which may be aromatic, partially saturated or fully saturated and may contain from 1 to 4 hetero atoms selected from nitrogen, oxygen, sulfur, C(O) and C(=NR_{25}), and each ring system may contain not more than two oxygen atoms, not more than two sulfur atoms, not more than two C(O) groups and not more than one C(=NR_{25}) group, and each ring system may itself be mono- or poly-substituted by C_1-C_6alkyl, C_1-C_6haloalkyl, C_2-C_6alkenyl, C_2-C_6haloalkenyl, C_2-C_6alkynyl, C_2-C_6haloalkynyl, C_1-C_6alkoxy, C_1-C_6haloalkoxy, C_3-C_6alkenyloxy, C_3-C_6alkynyl-oxy, mercapto, amino, hydroxy, C_1-C_6alkylthio, C_1-C_6haloalkylthio, C_3-C_6alkenylthio, C_3-C_6-haloalkenylthio, C_3-C_6alkynylthio, C_1-C_3alkoxy-C_1-C_3alkylthio, C_1-C_4alkylcarbonyl-C_1-C_3alkyl-thio, C_1-C_4alkoxycarbonyl-C_1-C_3alkylthio, cyano-C_1-C_3alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6halo-alkylsulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylsulfonyl, aminosulfonyl, C_1-C_2alkylamino-sulfonyl, N,N-di(C_1-C_2alkyl)aminosulfonyl, di(C_1-C_4alkyl)amino, halogen, cyano, nitro or phenyl, it being possible for the phenyl group in turn to be substituted by hydroxy, C_1-C_6-alkylthio, C_1-C_6haloalkylthio, C_3-C_6alkenylthio, C_3-C_6haloalkenylthio, C_3-C_6alkynylthio,

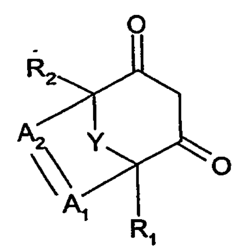
C_1-C_3alkoxy-C_1-C_3alkylthio, C_1-C_4alkylcarbonyl-C_1-C_3alkylthio, C_1-C_4alkoxycarbonyl-C_1-C_3-alkylthio, cyano-C_1-C_3alkylthio, C_1-C_6alkylsulfinyl, C_1-C_6haloalkylsulfinyl, C_1-C_6alkylsulfonyl, C_1-C_6haloalkylsulfonyl, aminosulfonyl, C_1-C_2alkylaminosulfonyl, N,N-di(C_1-C_2alkyl)amino-sulfonyl, di(C_1-C_4alkyl)amino, halogen, cyano or nitro, and the substituents at the nitrogen atom in the heterocyclic ring being other than halogen, and two oxygen atoms not being located next to one another;

R_{25} is hydrogen, hydroxy, C_1-C_6alkyl, C_1-C_6haloalkyl, C_1-C_6alkoxy, C_1-C_6alkylcarbonyl, C_1-C_6alkoxycarbonyl or C_1-C_6alkylsulfonyl; and

n_1 is 0, 1 or 2; and n_6 is 0, 1 or 2;

or an agronomically acceptable salt/isomer/enantiomer/tautomer of such a compound.

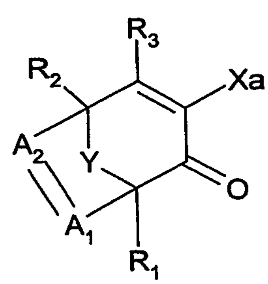
2. A compound of formula Da



(Da),

wherein Y, R_1, R_2, A_1 and A_2 are as defined for formula I in claim 1.

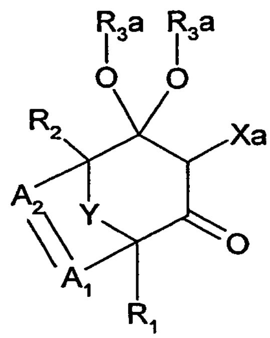
3. A compound of formula Db



(Db),

wherein A_1, A_2, R_1, R_2 and Y are as defined for formula I in claim 1, Xa is hydrogen, chlorine or bromine and R_3 is hydroxy or C_1-C_6alkoxy, with the exception of the compounds 3-chloro-8-oxa-bicyclo[3.2.1]oct-6-ene-2,4-dione; 3-chloro-bicyclo[3.2.1]oct-6-ene-2,4-dione; 3-chloro-4-hydroxy-bicyclo[3.2.1]octa-3,6-dien-2-one; 3,4-dibromo-8-oxa-bicyclo[3.2.1]octa-3,6-dien-2-one; 3,4-dibromo-1,5-dimethyl-8-oxa-bicyclo[3.2.1]octa-3,6-dien-2-one; 3,4-dibromo-bicyclo[3.2.1]octa-3,6-dien-2-one; 3,4-dichloro-8-oxa-bicyclo[3.2.1]octa-3,6-dien-2-one; 3,4-dichloro-bicyclo[3.2.1]octa-3,6-dien-2-one and 7,8-dibromo-5,9-dihydro-5,9-methano-benzo-cyclohepten-6-one.

4. A compound of formula VII



(VII),

wherein A_1, A_2, R_1, R_2, Y are as defined for formula I in claim 1, Xa is hydrogen, chlorine or bromine and R_3a is C_1-C_6alkyl or two R_3a together are $-CH_2CH_2-$.

5. A herbicidal and plant-growth-inhibiting composition, comprising a herbicidally effective amount of a compound of formula I according to claim 1 on an inert carrier.

6. A method of controlling undesired plant growth, which method comprises applying a compound of formula I according to claim 5, or a composition comprising such a compound, in a herbicidally effective amount to a plant or to the locus thereof.

7. A method of inhibiting plant growth, which method comprises applying a compound of formula I according to claim 5, or a composition comprising such a compound, in a herbicidally effective amount to a plant or to the locus thereof.

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(74) Agent: **SYNGENTA PARTICIPATIONS AG**; Intellectual Property, P.O. Box, 4002 Basel (CH).

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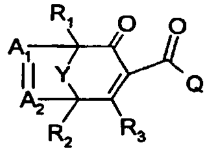
(54) Title: HERBICIDALLY ACTIVE NICOTINOYL DERIVATES



(I).

(57) Abstract: Compounds of formula (I), wherein the substituents are as defined in claim 1, and the agrochemically acceptable salts and all stereoisomers and tautomeric forms of the compounds of formula I are suitable for use as herbicides.

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 03/14949

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07D451/02 C07D213/50 C07D213/89

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, WPI Data, PAJ, EMBASE, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Y	WO 01/66522 A (EDMUNDS ANDREW ; LUETHY CHRISTOPH (CH); SYNGENTA PARTICIPATIONS AG (CH) 13 September 2001 (2001-09-13) cited in the application the whole document, claims page 53	1-7

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
1 July 2004	26/07/2004

Name and mailing address of the ISA	Authorized officer
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP 03/14949

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			WO	0166522	A1	13-09-2001